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McGILL
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1877-78

McGILL UNIVERSITY Calendar

OFFICERS OF INSTRUCTION.

PROFESSORS:—

JOHN WILLIAM DAWSON, M.A., LL.D., F.R.S.—Principal; Logan Professor of Geology and Professor of Natural History.	East Wing McGill College.
VEN. ARCHDEACON LEACH, D.C.L., LL.D.—Vice Principal, Dean of the Faculty of Arts and Molson Professor of English Literature.	16 University St.
HENRY ASPINWALL HOWE, LL.D.—Emeritus Professor of Mathematics and Natural Philosophy.	405 Sherbrooke Street E.
HON. J. J. C. ABBOTT, D.C.L.—Dean of the Faculty of Law and Professor of Commercial Law.	916 Sherbrooke Street.
GEORGE W. CAMPBELL, M.A., M.D., LL.D.—Dean of the Faculy of Medicine and Emeritus Professor in the Faculty of Medicine.	707 Sherbrooke Street.
WILLIAM E. SCOTT, M.D.—Professor of Anatomy.	43 Beaver Hall Terrace.
WILLIAM WRIGHT, M.D.—Professor of Materia Medica and Pharmay.	84 St. Famille St.
ROBERT P. HOWARD, M.D.—Professor of the Theory and Practce of Medicine.	47 Union Avenue.
REV. A. DE SOLA, LL.D.—Professor of Hebrew and Oriental Literaure.	73 McGill Col. Av.
HON. WILLIAM BADGELY, D.C.L.—Professor of Public and Crminal Law.	64 McGill College Avenue.
R. G. LAFLAMME, D.C.L.—Professor of the Law of Real Estate.	294 Lagauchetiere Street.
CHARLES F. A. MARKGRAF, M.A.—Professor of German Language and Literature.	316 Craig Street.
D. C. MCCALLUM, M.D.—Professor of Midwifery and Disease of Women and Children.	45 Union Avenue
ALEXANDER JOHNSON, M.A., LL.D.—Professor of Mathematics and Redpath Professor of Natural Philosophy, Vice-Dean of the Faculty of Arts.	70 McGill Col. Av.
REV. GEORGE CORNISH, M.A., LL.D.—Professor of Classical Literaure.	149 Metcalf Street.
PIERRE J. DAREY, M.A., B.C.L.—Professor of French Language and Literature.	39 McGill College Avenue.
ROBERT CRAIK, M.D.—Professor of Chemistry.	2 Phillips Square.
EDWARD CARTER, Q.C., D.C.L.—Associate Professor of Criminal Law.	31 Cadieux Street.
G. F. FENWICK, M.D.—Professor of Surgery.	24 Beaver Hall Terrace.
JOSEPH M. DRAKE, M. D.—Emeritus Professor in the Facult of Medicine.	19 Beaver Hall Terrace.
N. W. TRENHOLME, M.A., B.C.L.—Professor of Roman Law.	University Street.
J. S. C. WURTELE, B.C.L.—Associate Professor of Commercial Law	416 St. Antoine St.
WILLIAM H. KERR, D.C.L.—Professor of International Law. Acting Dean of the Faculty of Law.	387 Sherbrooke St.
GONZALVE DOUTRE, D.C.L.—Professor of Civil Procedure.	37 MacKay Street.
GILBERT P. GIRDWOOD, M.D—Professor of Practical Chemistry.	28 Beaver Hall Terrace.
REV. J. CLARKE MURRAY, LL.D.—Professor of Logic and John Frothingham Professor of Mental and Moral Philosophy.	Lincoln Avenue.
HON. H. F. RAINVILLE, LL.B.—(Laval) Associate Professor of Real Esate Law.	36 St. Denis St.
GEORGE ROSS, M.A., M.D.—Professor of Clinical Medicine.	48 Union Avenue.
BERNARD J. HARRINGTON, B.A., Ph., D.—Professor of Assaying and Mining, and Lecturer on Chemistry.	Wallbrae Pl., University Street.
THOMAS G. RODDICK, M.D.—Professor of Clinical Surgery	557 Dorchester St.
WILLIAM OSLER, M.D.—Professor of Institutes of Medicine.	1351 St. Catherine Street.
ROBERT T. GODFREY, M.D.—Professor of Hygiene and Public Healh	1360 St. Catherine Street.
WILLIAM GARDNER, M.D.—Professor of Medical Jurisprudence	525 St. Joseph St.
HENRY T. BOVEY, M.A., C. E.—Professor of Civil Engineering and Applied Mechanics.	McGill College.

LECTURERS:—

JOHN S. ARCHIBALD, B.A., B.C.L.—Lecturer in Criminal and Consitutional Law.	2 Barron Block
C. H. MCLEOD, Ba. App. Sc., Lecturer in Geometrical Drawing and Superintendent of Meteorological Observatory.	162 St. James St.
CHRISTOPHER A. GEOFFRION, B.C.L.—Lecturer in Roman Law.	69 Mansfield St.
EDMOND LAREAU, B.C.L.—Lecturer in Legal History.	184 St. Denis St.
FRANCIS J. SHEPHERD, M.D.—Demonstrator of Anatomy.	293 Notre Dame
PHILIP P. CARPENTER, Ph., D.—Lecturer in Malacology and Honorary Curator of Collection of Mollusca.	41 Beaver Hall Terrace.
ARCHIBALD DUFF, M.A.—Lecturer in Mathematics, Dept. App. Scienc.	506 Guy Street.
MATTHEW HUTCHINSON, B.C.L.—Lecturer in Civil Procedure.	42 Coursol Street
J. EMERY ROBIDEAU, B.C.L.—Lecturer in Real Estate Law.	89 St Christophe.

JOHN ANDREW, Instructor in Elocution.	64 Roy Street
FREDERICK BARNJUM, Instructor in Gymnastics.	19 University St.

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ADDENDA TO THE ANNOUNCEMENT OF THE FACULTY OF MEDICINE.

(Session of 1877-8.)

1. Amendments of the Regulations.

The following will come into force in the Session of 1877-8:

(1.) A practical examination in Anatomy will form part of the Primary Examination.

(2.) Medical and Surgical Anatomy will form part of the practical examination by the Clinical Professors.

(3.) The attendance upon the lectures on Hygiene will be compulsory.

(4.) Students may present themselves for examination in Materia Medica at the end of the second year.

(5.) The section in clause 9 of the Qualifications for the Degree in Medicine relating to the Thesis or Inaugural Dissertation is cancelled.

(6.) Eighteen months' Hospital attendance will be required instead of twelve.

(7.) A certificate of having compounded Medicines for six months' will be necessary to qualify for Degree.

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2. New Medical Act for Quebec.

The following Provisions of the Act 40 Vic., Chap. 29, apply to Students belonging to the Province of Quebec:—

"From and after the passing of this act, no person shall be admitted as a student of medicine, surgery or midwifery, unless he shall have obtained a certificate of qualification from the Provincial Medical Board, and no one shall be entitled to the licence of the college on presentation of a Diploma unless he has been previously admitted to the study of medicine in accordance with the provisions of this act, or unless he has passed an equivalent preliminary examination before an authorized College or Licensing Board in Her Majesty's Dominions, acceptable to the Board created by this Act."

The Matriculation Examination is conducted by Examiners appointed by the "Provincial Medical Board," and the examinations are held twice a year, viz.,—upon Wednesday of the week after Easter at Montreal, and again upon the last Wednesday but one of the month of September at Quebec.

The requirements of the standard for the Matriculation are English and French, Latin, Geography, History, Arithmetic, Algebra, Geometry, *Belle-lettres*, and any one of the following subjects, Greek, Natural and Moral Philosophy.

The fee for the Matriculation Examination is $10, one half of which will be returned to unsuccessful candidates.

The Matriculation Examination of the College of Physicians and Surgeons of Ontario is accepted from Students belonging to that Province.

Of the four years study *after* having passed the Matriculation Examination required by the new Medical Act, three six months' sessions, at least, must be attended at a University, College, or Incorporated School of Medicine recognized by the "Provincial Medical Board," and the first session must be attended during the year immediately succeeding the Matriculation Examination.

BENEFACTORS OF

McGill University, Montreal.

I. ORIGINAL ENDOWMENT, 1811.

THE HONOURABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and Testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money, unto the "Royal Institution for the advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of his Majesty, King George the Third, to erect and establish a University or College for the purpose of Education and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended, requiring that one of the Colleges to be comprised in the said University, should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above mentioned property was estimated at the date of the bequest at - - - - - - - - $120,000,

II. WILLIAM MOLSON HALL.

In 1861, the "William Molson Hall," being the west wing of the McGill College buildings, with the Museum Rooms, and the Chemical Laboratory and Class Rooms, was erected through the munificent donation of the founder whose name it bears.

III. ENDOWED CHAIRS.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, by the Honourable John Molson, Thomas Molson, Esq., and William Molson, Esq.—$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, by Peter Redpath, Esq.—$20,000.

THE LOGAN CHAIR OF GEOLOGY, in 1871, by Sir W. E. Logan, LL.D., F.R.S., and Hart Logan, Esq.—$20,000.

THE JOHN FROTHINGHAM CHAIR OF MENTAL AND MORAL PHILOSOPHY, in 1873, by Miss Louisa Frothingham.—$20,000.

IV. EXHIBITIONS AND SCHOLARSHIPS IN ARTS.

THE JANE REDPATH EXHIBITION, $100 annually,—founded in 1868 by Mrs. Redpath of Terrace Bank, Montreal, and endowed with the sum of $1,667.

THE GOVERNOR'S SCHOLARSHIP of $100 annually—founded by subscription of members of the Board of Governors in 1869.

THE McDONALD SCHOLARSHIPS AND EXHIBITIONS, 10 in number—founded in 1871, by William C. McDonald, Esq.—Annual value, $1,250.

THE CHARLES ALEXANDER SCHOLARSHIP, for Classics,—founded in 1871, by Charles Alexander, Esq.—Annual value, $120.

THE TAYLOR SCHOLARSHIP,—founded in 1871, by T. M. Taylor, Esq.—Annual value, $100.

THE SCOTT EXHIBITION,—founded by the Caledonian Society of Montreal in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with the sum of $1100 subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Department of Practical and Applied Science.

V. ENDOWMENTS OF MEDALS.

In 1856 Henry Chapman, Esq., founded a gold medal to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874 with the sum of $700.

In 1860 the sum of £200 presented to the College by H. R. H. the Prince of Wales was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal," was founded and endowed by Mrs. John Molson of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course to comprise and include the works of Shakespeare and the Literature of England from his time to the time of Addison, both inclusive, and such other accessary subjects as the Corporation may from time to time appoint,—was founded and endowed by citizens of Montreal, on occasion of the three hundredth anniversary of the birth of Shakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Edmund Logan LL.D., F.R.S., F.G.S., &c.

In 1865 the "Elizabeth Torrance Gold Medal," was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in law, and more especially for the highest proficiency in Roman Law.

In the same year, the "Holmes Gold Medal," was founded by the Medical Faculty, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine, who shall undergo a special examination in all the branches, whether Primary or Final.

In 1874 a Gold and a Silver Medal were given by His Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts.

VI. SUBSCRIPTIONS TO THE GENERAL ENDOWMENT

1856.

John Gordon McKenzie, Esq.	$2000	Honourable John Rose	$600
Ira Gould, Esq.	2000	Charles Alexander, Esq.	600
John Frothingham, Esq.	2000	Moses E. David, Esq.	600
John Torrance, Esq.	2000	Wm. Carter, Esq.	600
James B. Greenshields, Esq.	1200	Thomas Paton, Esq.	600
William Busby Lambe, Esq.	1200	Wm. Workman, Esq.	600
Sir George Simpson, Knight.	1000	Honourable Sir A. T. Galt	600
Henry Thomas, Esq.	1000	Honourable Luther H. Holton	600
John Redpath, Esq.	1000	Henry Lyman, Esq.	600
James McDougall, Esq.	1000	David Torrance, Esq.	600
James Torrance, Esq.	1000	Edwin Atwater, Esq.	600
Honourable James Ferrier.	1000	Theodore Hart, Esq.	600
John Smith, Esq.	1000	William Forsyth Grant, Esq.	600
Harrison Stephens, Esq.	1000	Robert Campbell, Esq.	600
James Mitchell, Esq.	1000	Alfred Savage, Esq.	600
Henry Chapman, Esq.	600	James Ferrier, Jr., Esq.	600
Honourable Peter McGill	600	William Stephens, Esq.	600
John James Day, Esq.	600	N. S. Whitney, Esq.	600
Thomas Brown Anderson, Esq.	600	William Dow, Esq.	600
Peter Redpath, Esq.	600	William Watson, Esq.	600
Thomas M. Taylor, Esq.	600	Edward Major, Esq.	600
Joseph McKay, Esq.	600	Honourable Charles Dewey Day	200
Donald Lorn McDougall, Esq.	600	John R. Esdaile, Esq.	200

1871

William Molson, Esq.	$5000	T. W. Ritchie, Esq.	$600
William C. McDonald, Esq.	5000	A. & W. Robertson, Esqs.	600
Thomas Workman, Esq.	5000	Messrs. Sinclair, Jack & Co.	250
John Frothingham, Esq.	5000	John Reddy, Esq. M.D.	100
J. H. R. Molson, Esq.	2000	Wm. Lunn, Esq.	100
John McLennan, Esq.	1000	Kenneth Campbell, Esq.	100
B. Gibb, Esq.	600	R. A. Ramsay, Esq.	100
W. Notman, Esq.	600	William Rose, Esq.	50

VII. ENDOWMENT FOR DEPARTMENT OF PRACTICAL SCIENCE.

1871

Daniel Torrance, Esq.,	$5000
George Moffatt, Esq.	1000
Charles J. Brydges, Esq.	1000
Robert J. Reekie, Esq.	1000
Hon. James Ferrier (per annum for 7 years)	100
Donald Ross, Esq., (per annum for 5 years,	50
Peter Redpath, Esq., do	400
John H. R. Molson, Esq., do	400
George H. Frothingham, Esq., do	400
T. James Claxton, Esq., (per annum).	100
Charles Gibb, B. A., Donation for Apparatus,	50
Peter Redpath, Esq., } continuation of annual donation to J. H. R. Molson, Esq., } Department of Applied Science..	400
Executors of the Estate of the late G. H. Frothingham, Esq., continuation of annual Donation of the late G. H. Frothingham, Esq.	400

VIII. SUBSCRIPTIONS FOR SPECIAL OBJECTS.

Subscriptions for the purchase of Philosophical Apparatus, 1867.

William Molson, Esq.,	$500	John Frothingham, Esq.,	$100
John H. R. Molson, Esq.	500	David Torrance, Esq.,	100
Peter Redpath, Esq.,	500		
George Moffatt, Esq.,	250		$2050
Andrew Robertson, Esq.,	100		

Subscriptions for the erection of a fire-proof Building for the Carpenter Collection of Shells, 1868.

Peter Redpath, Esq.,	$500	Wm. Dow, Esq.,	$100
William Molson, Esq.,	500	Thomas Rimmer, Esq.,	100
Harrison Stephens, Esq.,	100	Andrew Robertson, Esq.,	100
Robert J. Reekie, Esq.,	100	Mrs. Redpath,	100
John H. R. Molson, Esq.,	100	Benaiah Gibb, Esq.,	50
Sir William E. Logan, F.R.S.	100	Honourable John Rose,	30
John Molson, Esq.,	100		
Thos. Workman, Esq., M.P.	100		$2,180
Geo. H. Frothingham, Esq.,	100		

Subscriptions for the Erection of the Lodge and Gates.

William Molson, Esq.,	$100	James A. Mathewson, Esq.,	$100
John H. R. Molson, Esq.,	100	Peter Redpath, Esq.,	100
William Workman, Esq.,	100	G. H. Frothingham, Esq.,	100
Joseph Tiffin, Jr., Esq.,	100	G. D. Ferrier, Esq.,	100
Thos. J. Claxton, Esq.,	100	Geo. W. Warner, Esq.,	100
James Linton, Esq.,	100	John Smith, Esq.,	100
William McDougall, Esq.,	100	Charles Alexander, Esq.,	100
Charles J. Brydges, Esq.,	100	J. Evans, Esq.,	100
George Drummond, Esq.,	100	Henry Lyman, Esq.,	100
Thomas Rimmer, Esq.,	100		
William Dow, Esq.,	100		$2,100
John Frothingham, Esq.,	100		

Subscriptions for the internal fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A.M., M.D.,	$1200	Robert Craik, M.D,	200
Wm. E. Scott, M.D.,	200	Geo. E. Fenwick, M.D.,	200
Wm. Wright, M.D.,	200	Joseph M. Drake, M.D.,	200
Robert P. Howard, M.D.,	200	George Ross, M.A., M.D,,	50
Duncan C. McCallum, M.D.,	200		

Library and Museum Funds and Subscriptions..

Mrs. G. H. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan Shells	$233	Wm. Molson, Esq., for Library Fund.	$4000
T. J. Claxton, Esq., £50 sterling for additions to the Museum.	$250	Wm. Molson, Esq., for Museum Fund.	$2000
		Hon. F. W. Torrance, Library Fund.	$1000
		John Thorburn, M.A., for the Library.	$90

A Lady, for the purchase of Mining Models..... $1000
Thos. McDougall, Esq., for the same..... $35
J. Livesey, Esq., through Dr. Harrington, for the same.....*e*..... 50

Miscellaneous.

Hon. C. Dunkin, M.P., in aid of the chair of Practical Chemistry.	$1,200	T. M. Thompson, Esq., $250 for two Exhibitions in September, 1871, $200 for two exhibitions in 1872.	$450
Principal Dawson, in aid of the same.	$1,200	Rev. Colin C. Stewart, for the "Stewart Prize in Hebrew."	$60
P. Redpath, Esq.. do do	$266		

Neil Stewart, Esq., of Vankleek Hill, continuing the annual prize in Hebrew, instituted by the late Rev. Colin Stewart..... 20 00
R. A. Ramsay, MA., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill..... 150 00

XI. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannah Willard Lyman Memorial Fund" contributed by subscription of former pupils of Miss Lyman, and invested as a permanent Endowment, to furnish annually a Scholarship or Prize in a College for Women affiliated to the University; or in Classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1100.

XII. SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books—presented by Peter Redpath, Esq., of Montreal, 1483 Volumes.
2. The Robson Collection of works in Archaeology and general Literature. Presented by Dr. John Robson of Warrington, England, 3436 Volumes.
3. The Charles Alexander Collection of Classical Works, presented by C, Alexander, Esq., of Montreal, 221 Volumes.
4. Frederick Griffin, Esq., Q. C., Collection of Books, being the whole of his Library, bequeathed by his will, 2692 Volumes.

XIII. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium—presented by the late Andrew F. Holmes, M.D.
2. The Carpenter Collection of Shells—presented by Philip P. Carpenter, Ph. D.
3. The Collection of Casts of Ivory Carvings issued by the Arundel Society—presented by Henry Chapman, Esq.

(See also "List of Donations to the Library and Museum," printed annually in the calendar.)

LIST OF SUBSCRIPTIONS TO THE FUND OF THE GRADUATES' SOCIETY FOR ENDOWMENT OF THE LIBRARY.

The Graduates' Society of the University, in 1876, passed the following Resolution :—

"*Resolved* :—"That the members and graduates be invited to subscribe to "a fund for the endowment of the Libraries of the University ; said fund to be "invested and the proceeds applied under the supervision of the Council of the "Society in annual additions to the Libraries ; an equitable division of said "proceeds to be made by the Council between the University Library and those "of the Professional Faculties."

In terms, thereof the following subscriptions have been announced to date, (May 1, 1877).

(*alphabetically arranged*).

O. H. Baynes, B.C.L.,	$ 50	In 2 Annual Instalments.
M. B. Bethune, M.A., B.C.L.,	50	Cash.
J. D. Cline, B.A., M.D.,	75	In 3 "
Lemuel Cushing, M.A., B.C.L.,	100	In 4 "
J. R. Dougall, M.A.,	50	In 5 "
R. W. Ells, M.A.,	50	In 5 "
Rev. J. Empson, B.A.,	25	Cash.
Charles Gibb, B.A.,	50	In 2 "
F. E. Gilman, LL.D., B.C.L.,	100	Cash.
J. S. Hall, B.A., B.C.L.,	50	In 2 "
B. J. Harrington, B.A., B.C.L.,	50	In 2 "
Edward Holton, B.C.L.,	100	Cash.
F. J Keller, B.C.L.,	100	In 4 "
F. W. Kelley, B.A., B.C.L.,	100	In 4 "
Rev. R. Laing, M.A.,	100	In 4 "
F. S. Lyman, B.A., B.C.L.,	50	In 2 "
Wm. Molson, M.D.,	100	In 5 "
Fred. MacKenzie, B.C.L.,	100	Cash.
J. J. MacLaren, B.C.L.,	100	In 4 "
D. MacMaster, B.C.L.,	100	In 4 "
D. R. McCord, M.A., B.C.L.,	100	In 4 "
C. H. McLeod, Ba. App. Sc.,	50	In 5 "
Wm. Osler, M.D.,	100	In 4 "
R. A. Ramsay, M.A., B.C.L.,	100	Cash.
Alex. Robertson, B.A.,	100	In 4 "
George Ross, M.A., M.D.,	100	In 4 "
F. J. Shepherd, M.D.,	100	In 5 "
J. F. Torrance, B.A., Ba., App. Sc.,	100	In 5 "
N. W. Trenholme, M.A., B.C.L.,	100	In 4 "
D. F. H. Wilkins, Ba. App. Sc.,	5	Cash.
Total to date	$2 355	

ACADEMICAL YEAR 1877-8.

SEPTEMBER, 1877.

1	Saturday	Session of Normal School commences.
2	SUNDAY	
3	Monday	
4	Tuesday	
5	Wednesday	Meeting of Normal School Committee
6	Thursday	
7	Friday	
8	Saturday	Meeting of Governors.
9	SUNDAY	
10	Monday	
11	Tuesday	
12	Wednesday	
13	Thursday	
14	Friday	
15	Saturday	Meeting of Faculty of Arts. Meeting of Faculty of Law
16	SUNDAY	
17	Monday	Mat. and Supp. Ex'ns in Classics. Exhibition and Scholarship Examinations.
18	Tuesday	Mat. and Supp. Ex'ns in Mathematics. Exhibition and Scholarship Ex'ns.
19	Wednesday	Mat. and Supp Ex'ns in English, Logic, Men. & Mor. Phil. Exhib. & Schol. Ex.
20	Thursday	Mat. and Supp. Exmns. in Modern Languages & Natural Science. Exh. and Schol. Ex.
21	Friday	Meeting of Faculty of Arts. Lectures in Arts commence
22	Saturday	
23	SUNDAY	
24	Monday	Meeting of Faculty of Arts.
25	Tuesday	
26	Wednesday	
27	Thursday	
28	Friday	
29	Saturday	
30	SUNDAY	

OCTOBER, 1877.

1	Monday	Session of Law and Medical Faculties commences. Meeting of Depart. of Applied Science.
2	Tuesday	
3	Wednesday	Meeting of Normal School Committee.
4	Thursday	
5	Friday	
6	Saturday	Founder's Birthday. Matriculation Examination in Medicine. Meeting of Faculty of Law.
7	SUNDAY	
8	Monday	Meeting of Faculty of Arts.
9	Tuesday	The William Molson Hall opened 1862.
10	Wednesday	
11	Thursday	
12	Friday	
13	Saturday	Meeting of Governors.
14	SUNDAY	
15	Monday	
16	Tuesday	
17	Wednesday	
18	Thursday	
19	Friday	
20	Saturday	
21	SUNDAY	
22	Monday	Meeting of Faculty of Arts.
23	Tuesday	
24	Wednesday	Regular Meeting of Corporation. School Examiners appointed. Reports on Scholarships and Exhibitions. Accounts audited.
25	Thursday	
26	Friday	
27	Saturday	
28	SUNDAY	
29	Monday	
30	Tuesday	
31	Wednesday	

NOVEMBER, 1877

1	Thursday	Meeting of Normal School Committee.
2	Friday	
3	Saturday	Meeting of Faculty of Law.
4	SUNDAY	
5	Monday	Meeting of Faculty of Arts.
6	Tuesday	
7	Wednesday	
8	Thursday	Annual University Lecture.
9	Friday	
10	Saturday	Meeting of Governors.
11	SUNDAY	
12	Monday	Meeting of Depart. of Applied Science.
13	Tuesday	
14	Wednesday	
15	Thursday	
16	Friday	
17	Saturday	
18	SUNDAY	
19	Monday	Meeting of Faculty of Arts.
20	Tuesday	
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	
25	SUNDAY	
26	Monday	
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	

DECEMBER, 1877.

1	Saturday	Meeting of Faculty of Law.
2	SUNDAY	
3	Monday	Meeting of Faculty of Arts.
4	Tuesday	
5	Wednesday	Meeting of Normal School Committee.
6	Thursday	
7	Friday	Lectures in Arts terminate
8	Saturday	Meeting of Governors.
9	SUNDAY	
10	Monday	Meeting of Depart. of Applied Science.
11	Tuesday	Ex. in Natural Philosophy, 3rd and 4th years; in Classics 1st and 2nd years.
12	Wednesday	
13	Thursday	Examns in Classics, 3rd and 4th years; in Mathematics, 1st and 2nd years.
14	Friday	Examinations in English and Hebrew.
15	Saturday	Examinations in Applied Science.
16	SUNDAY	
17	Monday	Ex. in French, 1st year, in Men. and Mor. Phil. and Log.; and in App. Sci.
18	Tuesday	Examinations in Applied Science.
19	Wednesday	Exn. in Natural Science and Chemistry.
20	Thursday	Examinations in French and German.
21	Friday	
22	Saturday	Christmas Vacation commences.
23	SUNDAY	
24	Monday	
25	Tuesday	Christmas-Day.
26	Wednesday	
27	Thursday	
28	Friday	
29	Saturday	
30	SUNDAY	
31	Monday	

All Examinations commence at 9 A.M. and 2 P.M., unless otherwise specified.

JANUARY, 1878.

1	Tuesday	
2	Wednesday	Meeting of Normal School Committee.
3	Thursday	
4	Friday	Christmas Vacation ends
5	Saturday	Meeting of Faculty of Law.
6	SUNDAY	
7	Monday	Meeting of Faculty of Arts. Lecture in Arts, Law and Medicine re-commence. Meeting of Depart. of Applied Science.
8	Tuesday	
9	Wednesday	
10	Thursday	
11	Friday	
	Saturday	Meeting of Governors.
13	SUNDAY	
14	Monday	Meeting of Faculty of Arts.
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	SUNDAY	
21	Monday	
22	Tuesday	
23	Wednesday	Regular Meeting of Corporation; Examiners appointed Annual Report to Visitor.
24	Thursday	
25	Friday	
26	Saturday	
27	SUNDAY	
28	Monday	Meeting of Faculty of Arts.
29	Tuesday	
30	Wednesday	
31	Thursday	

FEBRUARY, 1878.

1	Friday	Theses for Degree of D. C L. to be sent in to Dean of Faculty of Law
2	Saturday	Meeting of Faculty of Law.
3	SUNDAY	
4	Monday	Meeting of Depart. of Applied Science.
5	Tuesday	
6	Wednesday	Meeting of Normal School Committee.
7	Thursday	Meeting of Examiners.
8	Friday	
9	Saturday	Meeting of Governors.
10	SUNDAY	
11	Monday	Meeting of Faculty of Arts
12	Tuesday	
13	Wednesday	
14	Thursday	
15	Friday	
16	Saturday	
17	SUNDAY	
18	Monday	
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	Supplemental Examinations.
23	Saturday	
24	SUNDAY	
25	Monday	Meeting of Faculty of Arts
26	Tuesday	
27	Wednesday	
28	Thursday	

MARCH, 1878.

1	Friday	Theses for Degrees of M. D and B. C. L. to be sent in to Deans of Faculties. Lectures in Law close.
2	Saturday	Meeting of Faculty of Law.
3	SUNDAY	
4	Monday	Meeting of Depart. of Applied Science.
5	Tuesday	
6	Wednesday	No lectures. Meeting of Normal School Committee.
7	Thursday	Examinations in Law.
8	Friday	Examinations in Law.
9	Saturday	Exam. in Botany, Med. Fac. Meeting of Governors.
10	SUNDAY	
11	Monday	Meeting of Faculty of Arts. Examinations in Law
12	Tuesday	Examinations in Law.
13	Wednesday	Lectures in Medicine terminate. Examinations in Law
14	Thursday	Examinations in Law.
15	Friday	Examinations in Law.
16	Saturday	
17	SUNDAY	
18	Monday	Primary Examination for Degree in Medicine.
19	Tuesday	
20	Wednesday	
21	Thursday	Final Examination for Degree of M. D., C. M.
22	Friday	
23	Saturday	
24	SUNDAY	
25	Monday	Meeting of Faculty of Arts, Reports of Attendance on Lectures.
26	Tuesday	
27	Wednesday	
28	Thursday	Lectures in Arts terminate.
29	Friday	B. A. Honour Examinations. Meeting of Convocation for Degrees in Law and Medicine.
30	Saturday	
31	SUNDAY	

APRIL, 1878.

1	Monday	
2	Tuesday	Ordinary Examinations 3rd and 4th years in Natural Philosophy. 1st and 2nd years in Classics.
3	Wednesd.	
4	Thursday	B. A. Honour Examinations.
5	Friday	Ordinary Examinations 3rd and 4th years in Classics; 1st and 2nd years and Senior year Applied Science Dept. in Mathematics
6	Saturday	Ordinary Exam'ns in Applied Science.
7	SUNDAY	Theses for the Degree of M. A. to be sent in to the Dean.
8	Monday	Contin. of Exm'ns begun on Friday.
9	Tuesday	Meeting of Faculty of Arts; B. A. and other Honour Examinations; Ordinary Exam'ns in Applied Science.
10	Wednesd.	Exam'ns in English Lit., Rhet. and His.; in Logic; Mental and Moral Phil.
11	Thursday	
12	Friday	Examinations in French and Hebrew.
13	Saturday	Ordinary Examinations in App. Science
14	SUNDAY	Meeting of Governors.
15	Monday	
16	Tuesday	Ordinary Examinations in Natural Science and Chemistry.
17	Wednesday	Exam'ns in German; B. A. and other Honour Examinations.
18	Thursday	Exam'ns in Applied Science Depart.
19	Friday	Good Friday. Easter Vac. commences.
20	Saturday	
21	SUNDAY	Easter-Day.
22	Monday	
23	Tuesday	
24	Wednesday	Regular Meeting of Corporation. Meeting of Fac. of Arts. Meeting of Exam.
25	Thursday	B. A. and other Honour Examinations.
26	Friday	B. A. Honour Examinations, *viva voce*
27	Saturday	Meeting of Examiners. Declaration of
28	SUNDAY	Results of Examinations.
29	Monday	
30	Tuesday	Meeting of Convocation for Degrees in Arts.

All Examinations commence at 9 A.M. and 2 P.M., unless otherwise specified.

MAY, 1878.

1	Wednesday	Meeting of Convocation for Degrees in Arts.
2	Thursday	Normal School Committee.
3	Friday	
4	Saturday	
5	SUNDAY	
6	Monday	
7	Tuesday	
8	Wednesday	
9	Thursday	
10	Friday	
11	Saturday	Meeting of Governors.
12	SUNDAY	
13	Monday	
14	Tuesday	
15	Wednesday	
16	Thursday	
17	Friday	
18	Saturday	
19	SUNDAY	
20	Monday	
21	Tuesday	Examinations for Certificate of Associate in Arts.
22	Wednesday	
23	Thursday	
24	Friday	Queen's Birth-Day.
25	Saturday	
26	SUNDAY	
27	Monday	
28	Tuesday	
29	Wednesday	
30	Thursday	
31	Friday	

JUNE, 1878.

1	Saturday	
2	SUNDAY	
3	Monday	Exam'ns in Normal School commence.
4	Tuesday	
5	Wednesday	Normal School Committee.
6	Thursday	
7	Friday	
8	Saturday	Meeting of Governors.
9	SUNDAY	Whit-Sunday.
10	Monday	
11	Tuesday	
12	Wednesday	
13	Thursday	
14	Friday	
15	Saturday	
16	SUNDAY	
17	Monday	
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	
22	Saturday	
23	SUNDAY	
24	Monday	
25	Tuesday	
26	Wednesday	Regular Meeting of Corporation. Report of Normal School.
27	Thursday	
28	Friday	Normal School closes for Summer Vacation.
29	Saturday	
30	SUNDAY	

JULY, 1878.

1	Monday	
2	Tuesday	
3	Wednesday	
4	Thursday	
5	Friday	
6	Saturday	
7	SUNDAY	
8	Monday	
9	Tuesday	
10	Wednesday	
11	Thursday	
12	Friday	
13	Saturday	
14	SUNDAY	
15	Monday	
16	Tuesday	
17	Wednesday	
18	Thursday	
19	Friday	
20	Saturday	
21	SUNDAY	
22	Monday	
23	Tuesday	
24	Wednesday	
25	Thursday	
26	Friday	
27	Saturday	
28	SUNDAY	
29	Monday	
30	Tuesday	
31	Wednesday	

AUGUST, 1878.

1	Thursday	
2	Friday	
3	Saturday	
4	SUNDAY	
5	Monday	
6	Tuesday	
7	Wednesday	
8	Thursday	
9	Friday	
10	Saturday	
11	SUNDAY	
12	Monday	
13	Tuesday	
14	Wednesday	
15	Thursday	
16	Friday	
17	Saturday	
18	SUNDAY	
19	Monday	
20	Tuesday	
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	
25	SUNDAY	
26	Monday	
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	
31	Saturday	

Faculty of Arts.

The Principal (Ex-officio).

Professors :—Leach.	Professors :—Cornish.
De Sola.	Darey.
Dawson.	Murray.
Markgraf.	Harrington.
Johnson.	Bovey.

Dean of the Faculty :—Ven. Archdeacon Leach, D.C.L., LL.D.

Vice-Dean :—Alexander Johnson, LL.D.

Librarian :—Professor Markgraf.

[Contents.—*Course of Study*, §I. ; *Matriculation*, &c., §II. ; *Exhibitions*, &c., §III. ; *Examinations*, &c., §IV. ; *Exemptions*, &c., §V. ; *Medals*, &c., §VI. ; *Licensed Boarding-houses*, §VII. ; *Attendance*, &c., §VIII. ; *Library*, &c., IX. ; *Fees*, &c., §X. ; *Courses of Lectures*, §XI.]

The next Session of this Faculty will commence on September 15th, 1877, and will extend to April 30th, 1878.

§I. COURSE OF STUDY.

1. Undergraduates are arranged according to their standing, as Students of the First, Second, Third or Fourth Years; and are required to attend all the Courses of Lectures appointed for their several years, under the Regulations as to attendance and conduct stated in §VIII. The only exceptions are those in favour of Honour and Professional Students, stated in §V.

ORDINARY COURSE FOR THE DEGREE OF B. A.

First Year.—Classics ; French or German ; English Language and Literature ; Pure Mathematics ; History ; Elementary Chemistry.

Second Year.—Classics ; French or German ; Logic and Elementary Psychology ; Pure Mathematics ; Botany.

Third Year.—Classics ; Rhetoric ; Moral Philosophy ; Mixed Mathematics ; Experimental Physics ; Zoology.

Fourth Year.—Classics ; English Literature ; Mental Philosophy ; Mixed Mathematics ; Experimental Physics ; Mineralogy and Geology.

Undergraduates are required to study either French or German for two years, [viz., in the First and Second Years] taking the same language in each year. Any Student failing to pass the Examination at the end of the Second Year, will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other Lectures, attendance on which is optional.

The Lectures in Modern Languages will be so arranged that Students competent and desirous to take in the same years the Lectures in French and in German, may do so.

Students who intend to join any Theological School, on giving written notice to that effect at the beginning of the First Year, may take Hebrew instead of French or German.

The Faculty may permit any Student to take Spanish instead of French or German.

2. At the examination for the Degree of B. A., Honours are given in the following subjects, for which special Honour Courses are provided :—[For details see under §XI.]

1. *Classical Languages and Literature.*
2. *Mathematics and Physics.*
3. *Logic and Mental and Moral Philosophy.*
4. *English Language, Literature and History.*
5. *Geology and other Natural Sciences.*

Students taking B. A. Honours in any of the above Courses, may omit two of the ordinary subjects in the Degree Examination, under the conditions stated in §IV., 4.

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years as well.

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§ II. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation as Undergraduates are required to present themselves to the Dean of the Faculty, on the 17th of September, for examination ; they may, however, enter after the commencement of the Session, if, on examination, found qualified to join the classes.

The subjects of examination for entrance into the First Year, are Classics, Mathematics, and English.

In Classics.—Latin Grammar, Greek Grammar, and one easy Latin and one easy Greek Author. The authors recommended are Cæsar ; Sallust ; Virgil (Æneid, B. I.) ; Xenophon (Anabasis, B. I.) ; Homer (Iliad, B. I.).

In Mathematics.—Arithmetic ; Algebra, to Simple Equations, inclusive ; Euclid's Elements, Books, I., II., III.

In English.—Writing from Dictation.

[Associates in Arts who, at their special Examination, have passed in Latin, Greek, English, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

2. Candidates not matriculated in the University may be admitted to the standing of students of the Second Year, provided that they pass the Sessional Examinations of the First Year, or an examination in the following subjects at the beginning of the Second Year:—

In Classics.—*Greek.*—Homer, Book VI.; Xenophon, Anabasis, Book I. Grammar, and Prose Composition.

Latin.—Virgil, Æneid, Book VI.; Cicero, Orations against Catiline; Grammar and Prose Composition.

In Mathematics.—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (omitting propositions 27, 28, 29, of Book VI.).

Algebra.—To end of Quadratic equations (Colenso's Alg.).

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic.—Ordinary rules, Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

In English Literature.—English Grammar and Composition.

In French or German.—Grammar and easy Translation.

[Candidates must satisfy the Professor of French that they have a fair knowledge of De Fiva's Grammaire des Grammaires as far as Syntax; otherwise they must take German],

Students of other Universities may be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

PARTIAL STUDENTS.—Candidates for Matriculation as Partial students taking three or more Courses of Lectures, or as students in any Special Course, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

OCCASIONAL STUDENTS.—Persons desirous of taking one or two Courses of Lectures as Occasional students, may apply to the Dean for entry in his Register, and may procure from the Secretary tickets for the Lectures they desire to attend.

Every student is expected to present, on his entrance, a written intimation from his parent or guardian, of the name of the minister of religion, under whose care and instruction it is desired that the student shall be placed, who will thereupon be invited to place himself in communication with the Faculty on the subject. Failing such intimation from the parent or guardian, the Faculty will endeavour to establish such relations.

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§ III. SCHOLARSHIPS AND EXHIBITIONS.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not

more than three Sessions have elapsed since their Matriculation; and also to candidates who have obtained what the Faculty may deem equivalent standing in some other University.

3. Scholarships are divided into two classes:—[1] *Science* Scholarships; [2] *Classical and Modern Language* Scholarships. The subjects of Examination for each are as follows:—

Science Scholarships.—Differential and Integral Calculus; Analytic Geometry; Plane and Spherical Trigonometry; Higher Algebra and Theory of Equations; Pure Mathematics (as in Ordinary Course); Botany; Chemistry; Logic.

Classical and Modern Language Scholarships.—Greek; Latin; English Composition; English Language and Literature; French.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to candidates for entrance into the First Year.

Second Year Exhibitions are open for Competition to students who have passed the First Year Sessional Examination, provided that not more than two Sessions have elapsed since their Matriculation; and also to candidates for entrance into the Second Year.

The subjects of Examination are as follows:—

First Year Exhibitions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language, Chemistry, French.

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No student can hold more than one Exhibition or Scholarship at the same time; but four of the First Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another Year.

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty.

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz. :—in October, December, February and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every Session.

EXHIBITIONS AND SCHOLARSHIPS TO BE OFFERED IN 1877.

There are at present fourteen Scholarships and Exhibitions.

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal :—value, $100 yearly.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, ten in number, established by W. C. McDonald, Esq., Montreal :—value, $125 each, yearly.

THE GOVERNORS' SCHOLARSHIP, established by the Board of Governors:—value about $120 yearly

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects :— value, $120 yearly.

THE TAYLOR SCHOLARSHIP OR EXHIBITION, established by T. M. Taylor, Esq., Montreal :—value, $100 yearly.

The following will be offered at the Examinations commencing September 17th, 1877, under the regulations stated.

First Year.

FOUR EXHIBITIONS.—Two of $125, two of $100. The examinations will be in the following Subjects :—

Greek.—Homer, Iliad, bk. I. ; Xenophon, Anabasis, bk. I. ; Lucian, Charon.

Latin.—Cicero, Pro Lege Manilia ; Livy, bk. V., chaps. I.—XXV. ; Horace, Odes, bk. I.

Text Books.—Hadley's Elements of Greek Grammar.—Arnold's Greek Prose Composition, Exercises 1 to 25. Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV.

Mathematics.—Euclid, bk. I., II., III., IV.; Algebra to end of Harmonical Progression (Colenso). Arithmetic.

English.—English Grammar and Composition.—(Bain's Grammar, as far as Derivation.) Special exercises in Grammar and Composition.

Additional Exhibitions may be given in the First Year, should there not be candidates in the Second and Third Years.

Second Year.

THREE EXHIBITIONS.—Two of $125 each, and one of $100. The Examinations will be in the following subjects :—

Greek.—Homer, Iliad, bk. VI., and Odyssey, bk. IX. ; Xenophon, Hellenics, bk. I. : Arrian, bk. III.

Latin.—Virgil, Æneid, bk. VI. ; Livy, bk. V., chaps. XXVI.—LV.; Horace. Odes, bk. III. ; Cicero, Select Letters (Pritchard & Bernard, Clarendon Press Series).

Text Books.—Dr. William Smith's History of Greece. Liddell's History of Rome. Hadley's Greek Grammar. Smith's Student's Latin Grammar. Arnold's Greek Prose Composition. Smith's Principia Latina, Parts IV. and V. (A special paper will be set in Grammar and History.)

Mathematics.—The Mathematics (Ordinary and Honour) of the First Year.

English Literature.—Bain's Grammar ; Latham's Hand-Book, Prosody ;—Special exercises in Grammar and Composition.

Chemistry.—The metallic Elements as in Wilson's Elementary Chemistry.

Besides the above, two other Exhibitions of $125 and $100 respectively will be awarded to candidates for First or Second Year according to answering.

[N. B.—For the Classical subjects for the First and Second Year Exhibitions of 1878, see page 39.]

Third Year.

FOUR SCHOLARSHIPS.—Each $125 yearly.

Two of these will be given on Examinations in Science, as follows :—one in Mathematics and Logic, and one in Natural Science and Logic :—

1. *Mathematics.*—Differential Calculus (Hall, Chaps. 1 to 8 inclusive, Chaps. 12 and 14). Integral Calculus (Hall, chaps. 1 to 6 inclusive). Analytic Geometry (Salmon's Conic Sections). Hind's Plane and Spherical Trigonometry. Salmon's Modern Higher Algebra, (first six chapters), Todhunter's Theory of Equations. All the pure Mathematics of Ordinary Course with remainder of Drew's Conic Sections and of Colenso's Algebra [Part I.].

   Logic, as in Whately's Logic, Books II. and III.

2. *Natural Science.—Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams and Acrogens. *Chemistry*, as in Wilson's Elements.

   Logic, as in Whately's Logic, Books II. and III.

Two will be given on an Examination in Classics and Modern Languages, as follows :—

Classics.—Greek.—Euripides, Medea ; Demosthenes, the Olynthiacs ; Xenophon, Hellenics, bk. I.; Herodotus, bk. VIII. ; Thucydides, bk. I.

Latin.—Horace, Satires, bk. I , and Epistles, bk. I.; Virgil, Georgics, bk. I.; Terence, Adelphi ; Tacitus, Annals, bk. I.; Cicero Select Letters. [Vol. I. Teubner Series.]

Greek and Latin Prose Composition.

History.—Text Books.—Rawlinson's Manual of Ancient History ; Smith's Greece, Liddell's Rome.

English Language and Literature.—Spalding's English Literature; Bacon's Essays; Klipstein's Anglo-Saxon Grammar; Trench's Study of Words: Trench's English, Past and Present.

English Composition.—(High marks will be given for this subject, in order to encourage the practice of it, after the models of the best writers.)

French.—Racine, Britannicus; Moliere, les Femmes savantes. De Fiva's Grammaire des Grammaires. Bonnefon, French Literature to the end of 18th century. Translation from English into French.

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the students holding them to Exemption from the Sessional Fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of His Excellency the Governor General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, four of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Eight Exemptions from fees may be granted by the Board of Governors, from time to time, to the most successful students who may present themselves as candidates. By order of the Board one of these is given annually to the *Dux* of the High School, and of any other Academy or High School, sending up in one year, three or more candidates competent to pass creditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among pupils an Annual Bursary in the Faculty of Arts, of not less than $80, the Governors will add the amount of the fees of tuition thereto.

An Exemption from fees may be given annually to any teacher holding the Model School or Academy Diploma of the McGill Normal School, recommended by the Principal and Professors of the School, and passing creditably the Matriculation Examination in Arts.

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§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

1. There are two Examinations in each year; one at Christmas, and the other at the end of the Session. In both of these, students are arranged according to their answering, as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B. A. takes the place of the Sessional Examination.

Fourth Year students are required, at the Christmas Examination to pass in all the subjects of the obligatory lectures even though some of the subjects do not form part of their B. A. Examination.

2. Students who fail in any subject in the Christmas Examinations, are required to pass the Supplemental Examination in that subject before admission to the Sessional Examinations.

3. Students who fail in one subject in the Sessional Examinations are required to pass a Supplemental Examination in that subject. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending Lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purposes of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. The time for the Supplemental Examination will be fixed by the Faculty; and such Examination will not be granted at any other time except by special permission of the Faculty and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

I. FOR THE DEGREE OF B. A.

There are three University Examinations:—The *Matriculation*, at entrance; the *Intermediate*, at the end of the Second Year; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section II.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern language. The subjects for the Examination of 1878 are as follows:—

Classics.—Greek.—Arrian, Book III.
Latin.—Cicero, Pro Murena.
Latin Prose Composition.

Mathematics.—Arithmetic.
Euclid, Books I., II., III., IV., VI., and defs. of Book V.
Algebra, to Quadratic Equations inclusive.
Trigonometry, including use of Logarithms.

Logic.—Whately's Logic, Books II. and III.

English.—Spalding's History of English Literature.
An English Essay.

With one of the following:—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as in Gray's Text-book, omitting the Descriptions of the Orders.
2. *French.*—Moliere.—l'Avare; Racine.—Andromaque, Esther; History of French Literature from its commencement to the end of the 17th century (as in Bonnefon); Translation into French.
3. *German.*—Schmidt's German Guide. Adler's Reader. Translation into German.
4. *Hebrew.*—Grammar to the end of the Irregular verbs. Translation from the Book of Genesis. Exercises:—Hebrew into English, and English into Hebrew.

3. For the Final Examination six subjects are appointed, namely:—[1] Classics, [2] Mixed Mathematics, [3] Mental and Moral Philosophy, [4] Natural Science, [5] Experimental Physics, [6] One Modern Language and Literature (or Hebrew), with History. Every candidate must pass in four of these, namely:—Classics and Mixed Mathematics, which are obligatory: and any two of the remaining subjects, at his option. The subjects for 1878 are as follows:—

1. *Classics.*—Greek.—Aeschines, Contra Ctesiphontem.
Aeschylus.—Prometheus Vinctus.
Latin.—Livy, Book XXII.
Juvenal.—Satires III. and VIII.
Latin Prose Composition.
General Paper in Grammar and History.

2. *Mathematics.*—Mechanics, Hydrostatics, Optics, Astronomy } As treated in Galbraith and Haughton's Manuals.

[Except in the case of Exemptions to Professional Students as stated in §V.]

3. *Mental and Moral Philosophy.*—Murray's Outline of Hamilton's Philosophy, Stewart's Outline of Moral Philosophy, Pt. II.
4. *Natural Science.*—Geology and Mineralogy, as in Dana's Geology and Manual of Mineralogy.—The Zoology, Botany and Chemistry necessary to the study of the books above named; or as in Dawson's Hand-Book of Zoology; Gray's Structural and Systematic Botany, and Wilson's Inorganic Chemistry.
5. *Experimental Physics.*—1. *Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat.
6. *History and English Literature.*—Smith's Student's Gibbon.—Smith's Student's Hume.—Marsh's Hand-Book of the English Language and Collier's History of English Literature.

Or instead of History and English, candidates may take one of the following:

(a) *History and French.*—History as above. The course of French for the Fourth Year.—Boileau, Art poetique; Translation into French. and French Composition.

(b) *History and German.*—History as above. Schiller, Geschichte des 30 jahrigen Krieges; Goethe, Iphigenie auf Tauris; General paper on Grammar; Translation into German and German Prose Composition.

(c) *History and Hebrew.*—(Theological Students only.) History as above. Hebrew Grammar; Translation from first four chapters of Isaiah; any three of the Psalms; the Chaldaic portions of the Scriptures; Targum of Onkelos on Genesis, Chap. I.; Modern Hebrew Poetry, Halevi or Gabirol.

Exemptions for Candidates for Honours in the Third Year.

Candidates for Honours who, at the Sessional Examination of the Second Year, have passed in the First Class in the subjects in which they propose to compete for Honours, and not below Second Class in the others, may on application to the Faculty be allowed the following exemptions:—

They may in the Lectures and Examinations of the Third Year omit any one of the following subjects provided it is not immediately connected with that in which they study for Honours:—(1) Greek, (2) Latin, (3) Optics, (4) Rhetoric, (5) Moral Philosophy, (6) Experimental Physics, (7) Zoology.

The particular exemption desired must be stated to the Faculty in the application of the candidate, and no change can be made subsequently.

For the purpose of the above Regulation, the subjects of the Second Year in which Honours are given in the Third Year are classified under the following head:—

1. Classics. 2. Mathematics and Physics. 3. Logic, Moral and Mental Philosphy. 4. Natural Science. 5. English.

The candidate must pursue the Honour course selected to the satisfaction of the Professor, and must pass the Examination therein.

The above exemptions shall be granted only with reference to Honour subjects in which regular courses of Lectures are delivered in the Third Year.

Exemptions for Candidates for B. A. Honours.

Students who have obtained Honours at the end of the Third Year in any subject, and wish to be candidates for B. A. Honours in the same subject, are entitled to exemptions if they have been placed in the 1st. or 2nd. Class in any two of the four subjects required for the Final Examination. The Regulations concerning these exemptions are as follows:—

[1] They may claim to have the Third Year Examination in the two subjects referred to regarded as a B. A. Examination in the same. [This amounts to exemption at the ordinary B. A Examination from two of the subjects required above].

[2] They are required to attend the Ordinary Lectures of the Fourth Year in three subjects only. Two of these must be the subjects in which they are to pass the ordinary B. A. Examination, if Lectures are delivered in them; if not, the choice is left to the Candidate.

[N. B. Candidates are required to pass the Christmas Examination in the subjects in which they attend the ordinary Lectures.]

2. FOR THE DEGREE OF M. A.

Bachelors in Arts, of at least three year's standing, are entitled to the degree of Master of Arts after such examination and exercises as may be prescribed by the Corporation. The Regulation at present is, that the Candidate shall prepare a Thesis on some literary, scientific, or professional subject, approved by the Faculty. Such Thesis shall be reported on by the Faculty to the Corporation before the granting of the Degree.

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§ V. SPECIAL PROVISIONS FOR PROFESSIONAL STUDENTS.

1. LAW AND MEDICAL STUDENTS.

1. Students of the Third and Fourth Years, matriculated in the Faculties of Law or Medicine of this University, are entitled to the following exemptions :—

In the Third year they may omit the Lectures and Examinations in Optics, and in any one of the following subjects :—Zoology, Experimental Physics, or Rhetoric.

In the Lectures of the Fourth year they may omit, Greek and Astronomy ; and also Geology or Experimental Physics. At the Christmas Examinations of the Fourth Year, they may omit Astronomy and Optics.

In the Ordinary B. A. Examinations, they may, in Classics, pass in Latin alone ; and in Mixed Mathematics, in Mechanics and Hydrostatics alone.

2. To be allowed these privileges in either year, they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim exemptions as Professional Students, and must produce at the end of the Session Certificates of attendance on a full course of Professional Lectures during the year for which the exemptions are claimed.

2. STUDENTS OF AFFILIATED THEOLOGICAL COLLEGES.

1. Such Students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts, in the same manner as other students.

2. The Faculty will make formal reports to the Governing body of the Theological College, to which any such Students may belong, as to :—[1] their conduct and attendance on the classes of the Faculty ; and [2] their standing in the several examinations ; such reports to be furnished after the Christmas and Sessional Examinations, severally, if called for.

3. Matriculated Students are allowed no exemptions in the course for the degree of B.A., till they have passed the Intermediate Examination; but they may take Hebrew in the First and Second Years, instead of Modern languages.

4. In the Third and Fourth Years they are allowed exemptions as follows:—

In the Third Year, they may omit Optics, and Rhetoric, with Experimental Physics or Zoology.

In the Fourth Year, they may omit Astronomy, and English Literature, with Experimental Physics or Geology.

5. Certificates of attendance on the full course of lectures in the Theological College, during the year for which the exemptions are claimed, must be produced by Students who avail themselves of these exemptions, before presenting themselves for Examination.

[No Student will be allowed in the same session both Professional and Honour exemptions. Students are cautioned against difficulties that may arise from any change such as taking Professional exemptions in the Third Year, and Honour exemptions in the Fourth or vice versâ, e.g. a Professional Student who has not taken up "Optics" in the Third Year may be required by the regulations to take it up in the Fourth if he does not claim Professional exemptions in that Year.]

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§ VI. MEDALS, HONOURS, PRIZES AND CLASSING.

1. Gold Medals will be awarded in the B. A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the Ordinary Examinations for the Degree of B. A.

The *Chapman Gold Medal*, for the Classical Languages and Literature.

The *Prince of Wales Gold Medal*, for Logic and Mental and Moral Philosophy.

The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.

The *Shakspere Gold Medal*, for the English Language, Literature and History.

The *Logan Gold Medal*, for Geology and other Natural Sciences.

In the event of there being no candidate for any Medal, or of none of the candidates fulfilling the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subjects for which the Medal was intended. For details, see announcements of the several subjects below.

2. Honours, of First or Second Rank, will be awarded to those Matriculated Students who have successfully passed the Examinations in any Honour Course established by the Faculty, and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

3. CERTIFICATES of High General Standing will be granted to those Matriculated Students, who are placed in the First Class in the aggregate of the Studies proper to their year.

4. PRIZES OR CERTIFICATES, to those matriculated Students who may have distinguished themselves in the studies of a particular class, and have attended all the other classes proper to their year.

5. His Excellency the Earl of Dufferin has been pleased to offer a Gold and a Silver Medal for Competition in the Faculty of Arts

The subject for the next competition will be "The Wars of the Roses, their causes and political and social effects."

Essays for competition must be in the hands of the Dean of the Faculty of Arts, on or before October 1, 1877.

The subject for the competition of October 1878, will be "The Great Rebellion of 1642."

The Regulations with respect to competitors are as follows :—

1. The subject for competition shall be an Essay on any topic or period of Modern History, chosen with a due regard to the facility of gathering materials. The judges in forming their opinion shall consider no less the merit of the style than the clearness of the reasoning and the accuracy of the facts, in proof of which last, authorities must always be cited by the writers.

2. The competition shall be open to all regular students and graduates of the Faculty of Arts or of any Department of it, who have not exceeded seven years from their matriculation.

3. When sending in the Essay, the author shall conceal his name, distinguishing his composition by a motto, and sending at the same time his name sealed up in an envelope, on which the motto shall be inscribed. The envelopes of the unsuccessful candidates shall be destroyed unopened.

4. The Gold Medal shall be awarded to the best Essay and the Silver to the next best. Absolute merit shall be required in making the award of either medal. When a medal is not awarded, it may be reserved for future competition.

5. The winner of the Silver Medal in any year may in a subsequent year compete for the Gold Medal, but in no other case shall any person be awarded two of these Medals.

6. THE STEWART PRIZE of $20, is open to all Undergraduates of this, and also to Graduates of this or any other, University studying Theology in any College affiliated to this University, under the following rules :—

1. The prize will not be given for less than a thorough examination in Hebrew Grammar, passed in the First Class, in reading and translating the Pentateuch, and such poetic portions of the Scripture as may be determined.

2. In case competitors should fail to attain the above standard. the prize will be withheld and a prize of Forty Dollars will be offered in the following year for the same.

[Course for the present year ;—Hebrew Grammar (Gesenius) ; Translation and analysis of the first ten chapters of Genesis ; the prophet Habakkuk (the whole book) ; and the first five Psalms.]

3. There will be two Examinations of three hours each ; one in Grammar, and the other in Translation and Analysis.

This Prize founded by the late Rev. C. C. Stewart, M. A., and terminated by his death, has been re-established by the liberality of Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next Session.

7. The names of those who have taken Honours, Certificates, or Prizes, will be published, in the order of merit; and with mention, in the case of Students of the First and Second Years, of the schools in which their preliminary education has been received.

§VII. LICENSED BOARDING-HOUSES.

(Regulations for Students in Arts, passed by Corporation, April 1875.)

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep a boarding-house, shall produce evidence satisfactory to the Principal, as to their character and fitness, and the suitability of the house for the health and comfort of the students. They shall also supply him with a statement of charges.

3. The College shall supply to the keeper of each licensed boarding-house a Register in which the following facts shall be recorded by him or her :—(1.) The dates of the Student's entrance into and departure from the house. (2.) The hours of return of the Student to the house on every occasion on which this may be later than 10 P. M. This Register shall be returned to the Faculty at the end of every month.

4. The keeper of the boarding-house shall report immediately to the Principal, the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct :—

1. A Class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Professors shall note the attendance immediately on the commencement of their Lectures, and shall omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admonition by the Professor, shall be reported to the Dean of Faculty, who may reprimand the student or refer to the Faculty, as he may think proper. He may also suspend from Classes until the next meeting of the Faculty.

3. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty. [Under this rule attendance on at least two-thirds of the lectures will in all cases be required.]

4. While in the College, or going to and from it, Students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the College building or grounds, may admonish the Student, and if necessary report him to the Dean.

5. Every student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain, without, as well as within, the walls of the College a good moral character.

6. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes and honours, suspend from Classes, or report to the Corporation for expulsion.

7. Any student injuring the furniture or building will be required to repair the same at his own expense, and will in addition, be subject to such other penalty as the Faculty may see fit to inflict.

8. All cases of discipline involving the interests of more than one Faculty, or of the University in general, shall be immediately reported to the Principal or, in his absence, to the Vice-Principal.

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§ IX. LIBRARY AND MUSEUM.

1. The books in the Library consist of two divisions :—1st, those which may be lent ; and, 2nd, those designated by the general term "Books of Reference," which may not, under any circumstances be removed from the Library.

2. Students may borrow books from the Library on depositing the sum of four dollars with the Librarian, and signing a receipt for the books ; such deposit to be returned to the Student on his returning the books uninjured.

3. Students may borrow not more than three volumes at one time, except on special recommendation of a Professor, and must return them within two weeks, on penalty of a fine of one shilling for the first week of detention, and two shillings and sixpence for each subsequent week.

4. A Student incurring a fine will be debarred the use of the Library until the fine has been paid.

5. Any volume or volumes lost or damaged by a student shall be paid for by him, at such rates as the Faculty may direct, having reference to the value of the book and of the set to which it may belong.

6. Students may read in the Library at such hours as may be determined by the Faculty.

7. Professors and Lecturers may borrow any books required by them for their duties in the College, not exceeding ten volumes at any one time. Books so borrowed must be returned at or before the end of each Session.

8. Graduates in any of the Faculties, on making a deposit of four dollars are entitled to the use of the Library, subject to the same rules and conditions as students, but they are not required to pay the Annual Library Fee.

9. Members of the McGill College Book Club are, by a regulation of Corporation, entitled to the use of the Library on the same conditions as Graduates.

10. Persons not connected with the College may consult books in the Library, on obtaining an order from any of the Governors, or from the Principal, the Dean of Faculty, or any of the Professors ; and donors of books or money to the amount of Fifty Dollars may at any time consult books on application to the Librarian.

The Library will be open from 10 a. m. to 4 p. m., daily, except Saturdays. On Saturdays it will be open from 1 to 4 p. m.

12. No one is allowed to enter the alcoves or to take down books from the shelves, except the Governors, Members of Corporation, Professors, the Librarian and his assistants, or those whom any of the above may accompany personally.

13. A person desiring to read or to borrow a book, which he has ascertained from the Catalogue to be in the Library, will fill up one of the blank forms provided for Readers and Borrowers respectively, and hand it to the Librarian, who will thereupon procure him the book.

14. Readers must return the books they have obtained to the Librarian, before leaving the Library.

15. No conversation that can disturb Readers is permitted in the Library.

16. The time and conditions of study in the Museum will be arranged by the Professor of Natural History.

§ X. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only), - - - - - - - - $4 00

For the Second Year (exigible from students who enter in the Second Year, and also from those who have failed in the First Year and re-enter in the Second Year on Examination.) - - - - - - - - - 6 00

Sessional Fee, - - - - - - - - - - 20 00

Library Fee, - - - - - - - - - - 4 00

Gymnasium Fee, - - - - - - - - - - 2 50

Undergraduates and Students in Special Courses are required to pay all the above Fees.

Partial Students, viz: those taking three or more Courses of Lectures, are required to pay the Matriculation, Library and Gymnasium Fees, and $5 for each Class which they attend, or $20 for all the courses.

Occasional Students, taking one course of Lectures only, are required to pay $5 per Session for that course.

Occasional Students, taking two courses of Lectures are required to pay the Library Fee and $5 for each course.

The Matriculation, Library, and Gymnasium Fees are exigible from students holding exemptions from Sessional Fees.

Graduates in Arts, are allowed to attend, without payment of fees, all lectures, except those noted as requiring a special fee.

The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

Fee for the Degree of B. A. - - - - - - - $ 5 00

" " *M. A.* - - - - - - - 10 00

If the Degree of M.A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is - - - $25 00

The B. A. fee must be paid before the Examination.

The M. A. fee must be sent to the Secretary of the University; at the same time that the Candidate sends his Thesis to the Dean of the Faculty. This is a condition essential to the entertaining of his application.

§ XI. COURSES OF LECTURES.

I. ORDINARY COURSE.

1. CLASSICAL LITERATURE AND HISTORY

Professor, Rev. G. Cornish, M.A., LL.D.

Greek.

First Year.—Homer.—Odyssey, Book XII.
Xenophon.—Hellenics, Book I.
Greek Prose Composition.

Second Year.—
Euripides.—Medea.
Arrian.—Book III.

Third Year.—Lysias.—Contra Eratosthenem.
Æschylus.—Prometheus Vinctus.

Fourth Year.—Aeschines.—Contra Ctesiphontem.

LATIN.

First Year.—VIRGIL.—ÆNEID, BOOK VI.
CICERO.—EPISTOLAE SELECTAE.
Latin Prose Composition.

Second Year.—HORACE.—EPISTLES, BOOK I.
CICERO.—PRO MURENA.
Latin Prose Composition.

Third Year.—JUVENAL.—SATIRES I. and III.
PLAUTUS.—AULULARIA.
Latin Prose Composition.

Fourth Year.—LIVY.—BOOK XXII.
Latin Prose Composition.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation.

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2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, VEN. ARCHDEACON LEACH, D.C.L., LL.D.

First Year.—English Language and Literature.—Anglo-Saxon Grammar, Text-Books—Bain's English Grammar; Spalding's History of English Literature; Klipstein's Anglo-Saxon Grammar.

Third Year.—Rhetoric.—Text-Book—Whately's Rhetoric, I., II., III.

Fourth Year.—English Literature.—Text-Book—Marsh's Hand-Book.

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3. LOGIC, MENTAL AND MORAL PHILOSOPHY.

(JOHN FROTHINGHAM PROFESSORSHIP OF MENTAL AND MORAL PHILOSOPHY.)

Professor, REV. J. CLARK MURRAY, LL.D.

Second Year.—Elementary Psychology.—Text-Book—Stewart's Outlines of Moral Philosophy, Part. I.—Logic—Text-Book—Whatley's Logic.

Third Year.—Moral Philosophy.—Text-Book—Stewart's Outlines, Part. II.

Fourth Year.—Mental Philosophy.—Text-Book—Murray's Outline of Hamilton's Philosophy.

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4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B. C. L.

First Year.—DE FIVAS, Grammaire des Grammaires.
LA FONTAINE, les Fables.—MOLIERE, le Bourgeois gentilhomme.
Dictation. Colloquial exercises.

Second Year.—DE FIVAS, Grammaire des Grammaires.
RACINE, Britannicus.—MOLIERE, les Femmes Savantes.
Translation into French:—DR. JOHNSON, Rasselas.
History of the French Literature:—BONNEFON, Ecrivains célèbres de la France, (to the eighteenth century.)
Dictation. Parsing. Colloquial exercises.

Third Year.—POITEVIN, Grammaire élémentaire.
EMILE SOUVESTRE, Un Philosophe sous les toits. CORNEILLE, le Cid.

Translation into French—GOLDSMITH, Vicar of Wakefield.
French Composition. Dictation.

History of the French Literature of the 18th and 19th centuries :—
BONNEFON, Ecrivains modernes.

Fourth Year.—BARRIERE et CAPENDU, les Faux bons hommes.
PONSARD, l'Honneur et l'Argent.
Lectures on French Literature.
Translation into French, Shakspere, "As you like it."
French Composition. Dictation.

The Lectures in the Third and Fourth Years are given in French.

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5. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M. A.

First and Second Years—Ordinary Course:—This Course comprises Grammar, Reading and Analysis, Translations oral and written, and Dictation. Special regard is had to the affinities of the German with the English. Text-Books; Schmidt's German Guide (1st and 2nd Course); Adler's Progressive German Reader.

First Year.—Advanced Course:—Text-Books;—Schmidt's German Guide (1st and 2nd Course); Adler's Progressive German Reader.

Second and Third Years.—Advanced Course;—Text Books—Schmidt's German Guide (3rd Course); Readings in German Prose and Poetry (the Books to be used will be made known at the commencement of the Session.) Translations from English writers and Composition.

During this Course a series of Lectures will be delivered on the History of German Literature, from the earliest periods down to the classical age of Goethe and Schiller; closing with a brief notice of the state of German Literature at the present day.

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6. HEBREW AND ORIENTAL LITERATURE.

Professor, Rev. A. De Sola, LL.D.

Elementary Course.—For Students of the First and Second Years,—Grammar;—Text-Book, Gesenius' Hebrew Grammar, with exercises in Orthography and Etymology. Reading; Translation and Grammatical Analysis of Historical Portions of the Scriptures—Syntax—Mishlé Shualim—Fables, &c.

Advanced Course.—(For Students of the Second, Third and Fourth Years.)—Introduction to the study of Hebrew Poetry—its spirit and characteristics. Lowth and Sarchi as Text-Books. Translation from the Psalms, Lamentations and Isaiah. Ancient compared with Modern Hebrew Poetry; the productions of Halevi, Gabirol, &c. Grammar, Exercises, &c., continued.

The Chaldee Language:—Grammar, *Mebo Halashon Aramith* of J. Jeitteles. The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi.

The Syriac Language:—Grammar, (Uhlemann's) and Translation.

The course comprises lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of roots, &c., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

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7. SPANISH LANGUAGE AND LITERATURE.

Rev. Professor De Sola.

(Extra Fee for this Class, $5.00.)

The study of the Spanish Language on this continent, being generally pursued with special reference to commercial purposes, it will be sought to impart in this course, a practical knowledge of the Castilian, the richest and most harmonious of the Peninsular languages—as well as an acquaintance with its Literature.

Ollendorf's Spanish Grammar by Velazquez and Simmone, and the Reader of Velazquez, are the Text-Books employed in the Junior Class, who will also be exercised in composition by both written and oral exercises. In the Senior Class, Fernandes' Exercises, continuation of Grammar and Composition, Cervantes' Don Quixote, Quintana, Vida del Cid, and Mariana's Historia will be the subjects of study. Besides a special comparison with the Portuguese Language, a general notice, literary and historical, of the Bascuence and other dialects, will be given.

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8. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M. A., LL.D.

Assistant, ARCHIBALD DUFF, M.A.

MATHEMATICS.—(*First Year*)—Arithmetic.—Euclid, Books, 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6). Todhunter's Edition.—Colenso's Algebra, part 1 to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry—Conic Sections treated Geometrically. (The Parabola as in Drew's Conic Sections,) the definitions of the Ellipse and Hyperbola, with the fundamental properties of their tangents.—Euclid, Book XI., Props. 1 to 21; Book XII., Props. 1, 2.

The course for the Intermediate University Examination consists of the Mathematics for the first two years except Conic Sections and Solid Geometry.

MATHEMATICAL PHYSICS.—*(Third Year)*—Galbraith and Haughton's Mechanics (omitting chap. 5 of Statics), Hydrostatics, Optics.

At the Ordinary Examination in Mechanics answers to questions on the Chapters on Friction, Collision of Bodies and Projectiles, will be taken into account only in determining the relative positions of those whose other answers shall entitle them to be placed in the First Class.

ASTRONOMY.—*(Fourth Year)*—Galbraith and Haughton's Astronomy—The lectures in this subject will be given before Christmas.

EXPERIMENTAL PHYSICS.—*(Third and Fourth Years.)*—1.—*Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3.—*Electricity.*—Statical and Dynamical; including Electro-Magnetism—Magneto-Electricity.—Thermo-Electricity.—Diamagnetism.—Electric Measurements.—Practical Applications to Telegraph, &c. 4.—*Magnetism.* 5.—*Sound.*—Theory of Undulations.—Production and Propagation of Sound—Vibrations of Strings, Rods, and Plates.—Vibrations of Fluids.—Musical sounds. Text-Books :—Ganot's Treatise translated by Atkinson, and Tyndall on Heat and Sound. This Course extends over two years.

The Subjects for the Session 1877-8 are Light and Heat.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection.

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9. GEOLOGY AND NATURAL HISTORY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor, J. W. DAWSON, LL.D., F.R.S., F.G.S.

I. BIOLOGICAL COURSE.

BOTANY.—*(Second Year.)*—Vegetable Histology and Organography. Nutrition and Reproduction of Plants. Classification. Descriptive Botany. Flora of Canada. Palæobotany and Geographical Botany.

Text-Book.—Gray's Structural and Systematic Botany.

[A prize of $20 will be given for the best collection of plants, and the greatest proficiency in their determination. (*) The prize collections or duplicates of them to remain in the College Museum. Candidates must be students in Botany of the previous session.]

ZOOLOGY AND PALÆONTOLOGY. *(Third Year.)*—Elements of Animal Physiology. Classification of Animals. Characters of the Classes and Orders of Animals, with Recent and Fossil Examples.

Text-Book.—Dawson's Hand-book of Zoology, with books of reference.

(*) From the surplus income of the Logan Medal Fund.

II. Geological Course.

Mineralogy and Geology. *(Fourth Year.)*

(1) *Mineralogy.*—Chemical and Physical characters of Minerals, including Crystallography, the methods of determining species, and Descriptive Mineralogy; with special reference to those species most important in Geology, or useful in the Arts.

(2) *Lithology and Stratigraphy.*—Composition of Rocks and their structure on the small scale; Classification of Rocks. Arrangement of Rocks on the large scale; Stratification, Elevation and Disturbances, Denudation.

(3) *Chronological Geology and Palæontology.*—Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America.

Text-Books.—Dana's Manuals of Mineralogy and Geology, with Lyell's Student's Elements.

The Lectures in Natural History will be accompanied with demonstrations in the Museum. Students in Natural History are also entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

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10. CHEMISTRY.

Lecturer, B. J. Harrington, B. A., Ph. D.

First Year.—A course of Elementary Chemistry preparatory to the course in Natural Science and Practical Science.

Text Book.—Wilson's Inorganic Chemistry.

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11. METEOROLOGY.

Superintendent of Observatory, C. H. McLeod, Bac. App. Sc.

Instruction in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those Students who attain sufficient proficiency in the methods of observation.

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12. ELOCUTION.

Mr. John Andrew, Instructor.

Students are recommended by the Faculty to avail themselves of the instructions of Mr. Andrew, who will make arrangements for evening classes to meet during the Session.

II. HONOUR COURSES.

1. CLASSICS.

B. A. HONOURS, BEING THE HONOUR COURSE FOR STUDENTS OF THE THIRD AND FOURTH YEARS.

Candidates for B. A. Honours in Classics, will be examined in the following subjects :—

I. GREEK.

I.—*Greek Philosophy.*

Plato.—Republic, Books I. and II.
Aristotle.—Nicomachean Ethics, Books I. and II.

II.—*Greek History.*

Herodotus.—Books VIII. and IX.
Thucydides.—Book I.
Xenophon.—Hellenics, Books I. and II.

III.—*Greek Poetry.*

a. Epic.—Homer.—Odyssey, Books I. II. and III.
Hesiod.—Works and Days.

b. Dramatic.—Æschylus.—Prometheus Vinctus.
Seven against Thebes.
Sophocles.—Antigone.
Euripides.—Hippolytus.
Aristophanes.—The Frogs.

c. Lyric and Bucolic.—Pindar.—Olympic Odes.
Theocritus.—Idyls, I. to IV.

IV.—*Greek Oratory.*

Demosthenes.—De Corona.
Æschines.—Contra Ctesiphontem.

II. LATIN.

I.—*Roman History.*

Livy.—Books XXI., XXII. and XXIII.
Tacitus.—Annals, Books I. and II.
Histories, Book I.

II.—*Roman Poetry.*

a. Epic.—Virgil.—Æneid, Books I. to IV.

b. Dramatic.—Plautus.—Aulularia
Terence.—Adelphi.

c. Satiric.—Horace.—Satires, Book I.
Juvenal.—Satt. VIII. and X.
Persius.—Satt. V. and VI.

III.—*Roman Oratory and Philosophy.*

Cicero.—De Imperio Cn. Pompeii.
De Officiis.

III. HISTORY OF GREECE AND ROME.

Text Books :—

1. Grote's History of Greece.
2. Arnold's History of Rome.
3. Mommsen's History of Rome.

IV. COMPOSITION.

1. Composition in Greek and Latin Prose.
2. General paper on Grammar, History and Antiquities.

The Examination for B. A. Honours will extend over four days. in the morning from 9 to 12, and the afternoon from 2 to 5.

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2. LOGIC, MORAL PHILOSOPHY, AND MENTAL PHILOSOPHY.

The Honour Course in this department extends over the Third and Fourth Years. The Lectures of the Third Year review the Ancient Greek Philosophy, while those of the Fourth Year discuss the chief modern systems in connection with the existing tendencies of speculation.

In the Third Year, the Examination will be on the following works, in addition to the Lectures of that Year :—

Schwegler's History of Philosophy, Chapters 1—21, inclusive.
Thomson's Outline of the Laws of Thought, Parts I, II, and III.

For B. A. Honours, the following works will form the subjects of Examination, besides the Lectures of the Fourth Year.

Schwegler's History of Philosophy.
Maurice's Mediæval Philosophy.
Thomson's Outline of the Laws of Thought, Parts I, II, and III.
Mill's Logic.
Kant's Critique of the Pure Reason.
Kant's Theory of Ethics (translated by T. K. Abbott.)
Plato's Theætetus.

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3. ENGLISH LANGUAGE, LITERATURE, AND HISTORY.

The examination for Honours in the Third Year will be on the works in the following course :—

I. *Language—*

Trench's Study of Words.
Trench's English, Past and Present.
Trench's Glossary.

II. *Literature*—

Milton.—Paradise Lost ; Comus ; Lycidas ; L'Allegro.

Dryden.—Absalom and Achitophel ; Annus Mirabilis ; Dedications to his Translations of Virgil's Æneid and the Satires of Juvenal.

Pope.—Dunciad ; Essay on Criticism ; Rape of the Lock ; Eloisa and Abelard ; Prefaces to his Translations of Homer's Iliad and Odyssey.

Bacon.—Essays.

III. *History*.—

Bacon's History of Henry VII.

Hallam's Constitutional History of England.

Longman's Life and Times of Edward III.

B. A. HONOUR COURSE.

For B. A. Honours, the examination will be on the Honour Course of the Third Year and the Lectures of the Fourth Year in addition to the following course :—

I. *Language*.—

Klipstein's Anglo-Saxon Grammar.

Thorpe's Analecta Anglo-Saxonica.

Marsh's Lectures on the English Language, by Smith.

Craik's Outlines of the History of the English Language.

Tyrwhitt's Essay on the Language and Versification of Chaucer.

II. *Literature*.—

Required from the Student a general acquaintance with the works of the English Classical Authors, and a more minute study of the following portions of English Literature :—

Shakespeare's Plays.

Chaucer.—Canterbury Tales ; The Prologue and the Knight's Tale ; the Flower and the Leaf ; the House of Fame.

Spencer.—Fairie Queen ; Books I., II.

Marlowe.—Faustus and Jew of Malta.

Required to be read in connection with this part of the Course :—

Craik's History of English Literature.

Hallam's Literary History of Europe—the parts relating to English Literature.

Johnson's Lives of the Poets.

Dunlop's History of Fiction.

III. *History*.—

Required a general acquaintance with the History of England to the year 1714, and a more minute knowledge of the Anglo-Saxon period, of the 13th and 14th centuries, and of the period from the accession of Elizabeth to that of George I.

The following books are recommended :—

Kemble's Saxons in England.

Lappenberb's England under the Anglo-Norman Kings.

Pauli's Life of Alfred the Great.
Froude's History of England.
Macaulay's History of England.
Clarendon's History of the Rebellion.

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4. MATHEMATICS AND PHYSICS.

MATHEMATICS.—*(First Year.)*—McDowell's Exercises on Modern Geometry, &c—Wood's Algebra—Todhunter's Theory of Equations.

MATHEMATICS.—*(Second Year.)*—Hind's Plane and Spherical Trigonometry.—Salmon's Conic Sections, first thirteen chapters.— Hall's Calculus :—Chapters 1, 2, 3, 4, 6, 7, of Diff. Cal. ; chapters 1, 2, 3, 4, 5, of Integ. Cal.

MATHEMATICAL PHYSICS.—*(Third Year.)*—Todhunter's Statics, (omitting Chapter 13)—Tait & Steele, Dynamics of a Particle.—Besant's Hydromechanics, Chaps. 1, 2, 3, 5.—Walton's Mechanical and Hydrostatical Problems.—Parkinson's Optics.—Main's Practical and Spherical Astronomy, (selected course.)

B. A. HONOUR COURSE.

PURE MATHEMATICS.—Hind's Plane and Spherical Trigonometry.—Todhunter's Theory of Equations.—Hall's Differential and Integral Calculus.—Boole's Differential Equations (selected course).—Gregory's Examples of the Calculus (omitting the last two Chapters).—Salmon's Conic Sections.—Salmon's Geometry of three Dimensions (selected course).

MECHANICS.—Todhunter's Statics.—Tait & Steele, Dynamics of a Particle —Routh's Dynamics of a Rigid Body.—Besant's Hydromechanics.—Walton's Mechanical Examples.—Walton's Examples in Hydrostatics.

ASTRONOMY.—Main's Astronomy.—Sir John Herschel's Outlines of Astronomy (Part II. and on the Lunar and Planetary Perturbations.)—Godfray's Lunar Theory.

Newton's Principia Lib. I., Sects. 1, 2, 3, 9, and 11.
LIGHT.—Lloyd's Wave Theory of Light,
HEAT,
ELECTRICITY,
MAGNETISM,
ACOUSTICS,
} As in ordinary course.

The examinations for B. A. Honours will continue *four* days.

The examination for Honours in the other years will continue *two* days.

Engineering students may be candidates for Honours.

COURSE FOR THE ANNE MOLSON MATHEMATICAL PRIZE.

The Mathematical Physics of the Honour Course in the Third Year.—

The value of the prize is about $64. It is open for competition to Third Year Students in April 1878.

5. NATURAL HISTORY AND GEOLOGY.

Third Year. Mineralogy and use of the Blowpipe. Lithology. Elementary course of Chronological Geology. Text Books :—Dana's Mineralogy and Synopsis by the Professor.

For the best examinations in this Course together with the Zoology of the third year, a prize of $25 will be given from the surplus income of the Logan Medal Fund.

Fourth Year. The Lectures will include :—

1. An advanced course in General Geology and Palæontology, in connection with which the Students will be required to read Dana's Geology and Lyell's Student's Elements.

2. Canadian Geology, in connection with which the Students will read Reports of the Geological Survey of Canada, and Dawson's Acadian Geology.

3. Practical Exercises and instruction in the methods of Observation and of conducting Geological Explorations, and in the study of Palæontology. Text-books:—Von Cotta on Ore Deposits, and Nicholson's Palæontology. Excursions for Field-work when practicable.

In addition to the above, the student is required to pass an examination in any one of the following subjects :—

1. Canadian Botany, as in Gray's "Text-Book," and "Manual," and specimens illustrative of these books from the Museum.

1. Zoology and Palæontology of Canada, as in Dawson's Hand-Book and Billings' Palæozoic Fossils, with specimens from the museum.

5. Mineralogy as in Dana, with specimens from the museum.

Candidates for Honours will be expected to attain to such proficiency as to be able to undertake original investigations in some at least of the subjects of study. Students in the Department of Applied Science may be Candidates for Honours.

NOTE TO PAGES 5 and 6.

For the First Year Exhibition Examination of 1878 the Classical subjects required will be :—

Greek.—Homer, Iliad, bk. I. ; Xenophon, Anabasis, bk. I. ; Demosthenes, Philippic I.

Latin.—Cicero, Pro Lege Manilia ; Horace Odes, bk. I. ; Ovid, Fasti, bk. I., vss., 1—300.

Latin Prose Composition.

A paper on Greek and Latin Grammar.

For the Second Year Exhibition Examination of 1878 the Classical subjects required will be :—

Greek.—Homer, Iliad, bk. VI., and Odyssey, bk. XII. ; Xenophon, Hellenics, bk. I. ; Herodotus, bk. I., Chaps. 26 to 91, inclusive, omitting Chaps. 57 to 68, inclusive.

Latin.—Horace, Odes, bk. III. ; Livy, bk. IX., Chaps. 1 to 25, inclusive ; Virgil, Æneid, bk. VI. : Cicero, Select Letters (Pritchard and Bernard).

Greek and Latin Prose Composition.

A paper on Grammar and History.

Lectures in the Undergraduate Course in the Faculty of Arts.

SESSION OF 1877-8.

FIRST YEAR.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
9	Classics.	* French.	* French: † Mathematics.	* French.	Mathematics.
10	Mathematics.	Classics.	Classics.	Classics.	Classics.
11	English.	† Mathematics.	English.	† Mathematics.	English.
12	Elementary Chemistry.	* German : * Hebrew.	Mathematics.	* German : * Hebrew.	Elementary Chemistry.
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SECOND YEAR.

9	* French.	Mathematics.	* German.	Mathematics.	* French.
10	Classics.	Botany.	Logic.	Botany.	* German, † Mathematics.
11	Logic.	Classics.	† Mathematics.	Classics.	Classics.
12	† Mathematics.	* Hebrew.	* French.	* Hebrew.	Logic.
1	* German.				

THIRD YEAR.

9	German (*b*) : † Math. Phys.	Classics.	† Classics, † Geol: † Math. Phy.	Classics.	† Classics.
10	French, (*b*) : † Ment. Phil.	† Mental Philosophy. (*a*)	Mathematical Physics.	French. (*b*)	Moral Philosophy.
11	Math. Physics.	Zoology.	Moral Philosophy.	Zoology.	Mathematical Physics.
12	Moral Philosophy.	§ Experimental Physics.	Rhetoric.	§ Experimental Physics.	† Mathematical Physics.
1		Hebrew.		Hebrew. (*b*)	German. (*b*)

FOURTH YEAR.

9	† Geology.	Astronomy (*a*); German, (*b*)	† Classics.	Astronomy, (*a*) : Geology. (*b*)	† Geology, † Classics.
10	Geology.	† M. Phy. : French; † Ment. Ph.	English Literature.	† Math. Phys. : † Mental Phil.	Geology.
11	Classics.	Mental Philosophy.	Classics.	Mental Philosophy.	French. (*b*)
12	German. (*b*)	§ Experimental Physics.	‡ Geology, † Math. Phys.	§ Experimental Physics.	
1				Hebrew. (*b*)	

(*a*) During First Term: (*b*) Optional.

† For Candidates for Honours.

§ From November 1st

* The Student may take at his option French or German in the first two years, or if a Theological Student, Hebrew,

‡ For Practical work.

Classes at 1 P.M., may be changed to other hours.

Library open every day except Saturday, 10 to 4; Saturday 1 to 4; The Museum will be open as arranged by the Professor of Natural History.

Department of Practical and Applied Science.

IN THE FACULTY OF ARTS.

Geology and Palæontology.—J. W. DAWSON, LL.D., F.R.S., F.G.S., Professor.
English Language.—VEN. ARCHDEACON LEACH, LL.D., Professor.
German.—C. F. A. MARKGRAF, M.A., Professor.
Mathematics and Natural Philosophy.—ALEXANDER JOHNSON, LL.D. Professor.
French.—P. J. DAREY, M.A., Professor.
Civil Engineering and Applied Mechanics.—H. T. BOVEY, M.A., C. E. Professor
Practical Chemistry.—GILBERT P. GIRDWOOD, M.D., Professor.
Assaying and Mining.—BERNARD J. HARRINGTON, B.A., Ph. D., Professor.
Lecturer in Surveying and Drawing.—C. H. MCLEOD, Bachelor of Applied Science.
Lecturer in Mathematics.—ARCHIBALD DUFF, M.A.

The courses of study in this Department are designed to afford a complete preliminary training of a Technical as well as a Theoretical nature, for such students as are preparing to enter any of the various branches of the Professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Three distinct courses of study are provided; each of which extends over three, or under certain conditions (§ I) two years, and is specially adapted to the prospective pursuits of the student.

(1) Civil and Mechanical Engineering.
(2) Assaying and Mining.
(3) Practical Chemistry.

The Degrees conferred by the University upon such Undergraduates of this Department as shall fulfil the conditions and pass the examination hereinafter stated (§IV) will be, in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular course of study pursued; and subsequently the degree of "Master of Engineering" on those who have pursued Course 1st, and of "Master of Applied Science" on those who have pursued either of the remaining Courses [2 and 3.]

By an Amendment, passed by the Legislature of Quebec, to the Act affecting Provincial Land Surveyors, any person who has received from the University, after due examination, a Degree or Diploma of Qualification as a Civil Engineer and Land Surveyor, and has also passed, during the first or second year of his University course, or previously, the Preliminary Examination, required by the sixth section of the Act, may be received as an Apprentice by any Land Surveyor and shall thereupon be holden to serve as such Apprentice during twelve months of service, or, if he has passed through such University course of study in less time than two full years, then, for such time of actual service as with the period spent by him in the University course of study suffices to make up the full time of three years.

§ I. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation must present themselves for examination on the 17th of September 1877. They may, however, be admitted at a later period of the Session, upon special application, if prepared to take their places in the classes in progress.

FOR ENTRANCE INTO THE JUNIOR YEAR, the subjects for examination will be :—

Mathematics.—Arithmetic ; Algebra, to Simple Equations inclusive ; Euclid's Elements, Books I., II., III.

English.—Writing from Dictation.

Candidates if unable to satisfy the Examiners in the above shall not matriculate, but if recommended by the examiners may enter the Preparatory Year (for course see § III.)

2. Candidates may enter in the Second or Middle Year, and so reduce the course necessary for the degree in Applied Science, from three to two years, if competent to pass a satisfactory examination in the following subjects. In addition to this, those who intend to pursue Course (1.) or (2.) must satisfy the Lecturer in Surveying and Drawing that they possess a reasonable knowledge of the elements of Surveying and Levelling and of Linear Drawing and Projection, as in Gillespie's Land Surveying, and Davidson's Linear Drawing and Orthographic Projection. Those entering Course (3.) must satisfy the Professors that they have a sufficient knowledge of Botany and of Drawing as above.

Euclid.—Books, I., II., III., IV., VI., with defs. of Book V. omitting propositions 27, 28, 29 of Book VI.

Algebra.—To end of Quadratic Equations (Colenso's Alg.)

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic. — Ordinary rules.—Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

English.—Writing from Dictation.

Chemistry.—Inorganic as in Wilson's Elements, (or the Candidate must take this subject in the Middle Year.)

French.—Candidates must satisfy the Professor of French that they have a fair knowledge of De Fiva's Grammaire des Grammaires, as far as Syntax ; otherwise they must take German.

Candidates must be prepared to pass in one or other of the above Examinations at the beginning of the session. Students who have passed in Class 1st or 2nd in the above subjects, in the Intermediate Examination of the University, may be admitted without further examination in such subjects.

3. Occasional Students may be admitted to the Professional Classes upon payment of special fees, (§VIII.)

Undergraduates in Arts may, if they obtain permission from the Faculty, take the Professional Classes in the Practical Science Department on payment of the fees for these classes.

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§ II. EXHIBITIONS AND PRIZES.

THE SCOTT EXHIBITION.

FOUNDED BY THE CALEDONIAN SOCIETY OF MONTREAL IN COMMEMORATION OF THE CENTENARY OF SIR WALTER SCOTT.

One exhibition of $66 on this Endowment will be offered for competition at the opening of the session of 1877-8 to Students entering the Senior Year.

Subjects :—All the pure Mathematics of the ordinary course of the Junior and Middle Years, with the remainder of Drew's Conic Sections and of Colenso's Algebra,—Engineering and Surveying of the two previous Years, with a Report on some Engineering work.—English Grammar, Bain's.—English Composition.—Hallam's Middle Ages. chaps. VIII. and IX.,—English Literature, Johnson's Lives of the Poets.—Zoology, Dawson's Handbook; Invertebrates and more especially Fossil Animals.

3. Prizes will be awarded after each Sessional Examination to such Matriculated Students as have passed the Examinations in all the subjects of one of the regular courses of study, and have taken the first rank in the Examinations in one of the subjects.

§ III. COURSES OF STUDY.

The following are the courses of study arranged for the approaching Session, 1877-8 :—

1. COURSE OF CIVIL ENGINEERING AND SURVEYING.

Junior Year.—Ordinary Mathematics of the First Year in Arts, (with Honour Mathematics as far as practicable) ; Chemistry ; English Language and Literature ; French or German ; Linear Drawing ; Orthographic and Isometric Projection ; Surveying and Mensuration ; Field Operations ; Topographical Mapping.

Middle Year.—Ordinary Mathematics, and Mathematical Physics of the Second and Third Years in Arts (with Honour Mathematics of the Second Year optional) ; Experimental Physics ; Zoology ; French or German ; Drawing.—Orthographic (continued) and Perspective Projection ; Plans and Sections ; Surveying (continued) ; Field Engineering ; Art of Construction ; Mensuration.

Senior Year.—Mathematical Physics (Honour Course of Third Year in Arts, optional) ; Spherical Trigonometry with applications to certain Problems in Practical Astronomy ; Elements of Analytic Geometry ; Elements of Differential and Integral calculus ; Experimental Physics ; Geology and Mineralogy ; French or German ; Applied Mechanics ; Principles of Mechanism ; Drawing—Constructive and Mechanical ; Construction ; Designing and Estimates ; Field Engineering.

MECHANICAL ENGINEERING.

In the Middle and Senior Years special instruction in Drawing and Designing will be provided for Students desirous of becoming Mechanical Engineers ; and such Students will be expected to avail themselves of opportunities for practical training in shops or works recognized by the University, credit for which will be given in the certificates.

2. COURSE OF MINING ENGINEERING AND ASSAYING.

Junior Year.—Same as Junior Year of Civil Engineering Course.

Middle Year.—Ordinary Mathematics and Mathematical Physics of Second and Third Years in Arts ; Experimental Physics ; Zoology, Geology and Mineralogy ; French or German ; Drawing—Orthographic (continued) and Perspective Projection ; Levelling ; Construction (in part) ; Mensuration ; Surveying ; Use of Blowpipe ; Assaying.

Senior Year.—Geology (Honour Course) ; French or German ; Experimental Physics ; Drawing of Geological Maps and Sections, and Plans of Mines ; Mining and Mineral Surveying ; Metallurgy ; Applied Mechanics ; Principles of Mechanism.

3. COURSE OF PRACTICAL CHEMISTRY AND ASSAYING.

Junior Year.—Same as above, excepting Surveying and with the addition of Botany.

Middle Year.—Ordinary Mathematics of Second Year in Arts; Experimental Physics; Zoology; French or German; Practical Chemistry; Drawing and Botany (unless these are taken in the Junior Year.)

Senior Year.—Mathematical Physics; Experimental Physics; Geology and Mineralogy; French or German; Metallurgy; Assaying.

PREPARATORY COURSE FOR CANDIDATES UNABLE TO ENTER THE JUNIOR YEAR.

1. Ordinary Mathematics of the Junior Year, with special instruction therein; English; Drawing and Surveying. Chemistry, and French or German are optional, but Students taking the lectures and passing the examinations in these subjects will be excused from further examinations on becoming candidates for entrance into the Middle Year.

Candidates who pass the final examination of the Preparatory Year may matriculate in the Junior Year without further examination, or may become Candidates for admission on examination into the Middle Year, as stated in Section I. 2.

OBSERVATORY.

Undergraduates taking any of the above courses may receive instruction in Meteorological observations from Mr. C. H. McLeod, Bac. App. Sc., in the College Observatory.

Students in the Department are not allowed to take subjects which do not form part of their course, without the sanction of the Department.

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§IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

There will be a Sessional Examination at the end of each year and also a Christmas Examination, in the same manner as provided for Undergraduates in Arts; but Supplemental Examinations will not be allowed to students failing in the Professional or Mathematical subjects of the Middle or Senior Years, except by special permission of the Faculty of Arts.

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UNIVERSITY EXAMINATIONS.

I. FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

Candidates must pass the Sessional Examinations of the Junior and Middle Years, or if admitted in the Middle Year, of that year only. They must also pass a Final Examination at the end of the Third Year, in all the subjects of that year, in addition to a special examination in Mathematics, in case of those who graduate in the course of Civil and Mechanical Engineering.

Graduates in Civil Engineering of this University may obtain this Degree and a Diploma in exchange for that which they at present hold, upon application to the Corporation through the Registrar, and upon payment of a fee of $3.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors in Applied Science of at least three years' standing, and must produce satisfactory certificates of having been engaged during that time upon *bona fide* work in either the Civil or Mechanical Branch of Engineering.

They must pass with credit an examination which will extend over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have, during the three preceding years, been engaged.

The examination will be held once in each year, in the second week of the month of December, and will be partly written and partly *viva voce.*

Notice of the intention of a Candidate to offer himself at any examination for this degree must be sent in, together with the necessary Certificates and Fees, not less than two calendar months before each examination is to be held.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years' standing, must present certificates of having been employed during that time under competent guidance in some branch of Scientific Work, and must pass with credit an examination in the Theory and Practice of those branches of Scientific Work in which they may have been engaged. The other conditions as under the last heading.

IV. FOR THE DEGREE OF B. A. WITH THAT OF BACHELOR OF APPLIED SCIENCE.

Undergraduates in Arts who have passed the Intermediate examination may (if qualified under §1,) take the Middle and Senior Years of any of the courses in Practical Science along with the Third and Fourth in Arts, and may in the Third and Fourth Years omit Mental and Moral Philosophy and may substitute French and German for Latin and Greek. Spanish may be taken instead of French or German.

In addition to the subjects of the Science course, they will be required to satisfy the Examiners in the following subjects; viz; Mathematics, Natural Science, Experimental Physics and Modern Languages.

Students in Arts desirous of availing themselves of these privileges are required to take a preliminary course of Linear Drawing and Projection in the Second Year.

Students proceeding to the double degree, will enjoy all privil, eges with reference to Scholarships, Exhibitions, Prizes and Honours in the same manner as Students in Arts.

Such Students may by permission of the Faculty be Candidates for B. A. Honours, and may be allowed to take the Examination for B. A. in their Fourth Year in Arts, and to take the Examination for the degree in Practical Science in the following year; or they may graduate in the Science course alone in the Fourth Year, and graduate in Arts in the following Year. In the latter case they shall not compete for medals with the regular Students of the Year.

Undergraduates in Arts of the Third or Fourth Years, or Graduates of any University, entering the Department of Practical Science, may at the discretion of the Professors be exempted from such lectures in that Department as they may have previously attended as Students in Arts, but must pass all of the examinations.

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§ V. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

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§ VI. LIBRARY AND MUSEUM.

Students in this Department will have the same privileges with reference to the Library and Museum as Undergraduates in Arts

MCGILL UNIVERSITY LIBRARY

§ VIII. FEES.

the Course of Engineering.—Classes in Arts, $20; Classes in Engineering, Surveying and Drawing, $25; Library, $4. In all $49 for each Session.

In the Course of Mining Engineering.—Classes in Arts, $20; Professional Classes—Junior Year, $25; Middle and Senior Years, $35; Library, $4. In all $49 to $59 for each Session.

In the Course of Practical Chemistry and Assaying.—Classes in Arts, $20; Professional Classes—Junior Year, $25; Middle and Senior Years, $35; Library, $4. In all $49 to $59 for each Session.

Matriculation Fee, for the Junior Year, (to be paid in the year of entrance only) $4.

" " for the Middle Year, (exigible from Students who enter in the Middle Year, and also from those who have failed in the Junior Year, and re-entered in the Middle Year on Examination) $6.

The Fees for the Preparatory Year are the same as for Junior Year.

Fee for Degree of Bachelor of Applied Science.—$10.

Fee for Degree of Master of Engineering or Master of Applied Science.—$50.

Laboratory Students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the Students paying $6 per Session for their use, and being responsible for breakage.

Occasional Students may be admitted to the Professional Classes in any year, but will be required to pay $20 in addition to the ordinary fee for that year, and $5 for entrance and use of the Library.

Students taking Blowpipe Analysis when it does not form part of their course are required to pay a fee of $5.

Occasional Students may attend the course of Instruction in Meteorology on paying a fee of $5.

For rule concerning Undergraduates in Arts see page 43.

The exemption of Graduates from Fees applies to such of the fees in Applied Science as are payable to the College.

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§ IX. COURSES OF LECTURES.

[For the Lectures in Mathematics, Physics, Natural Science, Modern Languages, &c., see under the Faculty of Arts, ante.]

1. Civil and Mechanical Engineering.

Professor.—H. T. Bovey, M.A., C.E.

Lecturer in Surveying and Drawing.—C. H. McLeod, Bac. App. Sc.

I. *Surveying.*

The object aimed at in this course is to afford the Student such instruction as will cause him to be of immediate service upon entering the office of the Engineer, or of the Surveyor; and the Lectures embrace the general principles of this important branch of Engineering, discussed under the heads of Chain and Angular (including Geodetic) Surveying and Levelling, as applied to ordinary as well as special operations in the Field.

The construction, adjustment, and use of the various angular and levelling instruments are fully described and illustrated.

In addition to the Lectures, a thorough course of Engineering Field-work, in accordance with the subjoined scheme, is undertaken by the class, during which the practical operations of the Engineer in the field are actually carried out by the students.

For the Junior Year.—Field work.—General triangulation and field surveying.

For the Middle and Senior Years.—(1) Running trial Levels, and making preliminary surveys between fixed points for a proposed line of Railway, incidentally illustrating the system of location from contours, and the method of road traversing. The line selected is then levelled and staked out ready for construction.

(2) A Hydrographic Survey during the progress of which the various methods employed in Marine Surveying are fully illustrated.

NOTE.—The above Surveys are undertaken on alternate years and at the conclusion of each, they are plotted and represented on finished plans.

II. *Geometrical Drawing.*

Junior Year.—The course of construction comprises, (1) the Elementary parts of the Geometrical construction of plane figures, and the principles of the Ellipse, Cycloids, Involutes and such other curves as occur in the Mechanical Arts, in Gearing, Arches and the like:—(2) Similar constructions in Solid Geometry, or the projections in plan and elevation of various objects, and their developments, Traces, Curves, Normals, the Interpenetration of Solids, and the delineation of objects in Isometrical Projection.

Middle Year.—The application of Traces to the solution of problems in Orthographic Projection, and drawing from Models. Perspective Projection based upon its geometrical principles.

III. *Construction.*

The subjects of the Lectures may be summed up as follows:—The strength and fitness of materials; the Engineering of Earth-work, Masonry, Carpentry, Structures in Iron, Common-Roads, Railways, Bridges and Viaducts, Tunnels, Canals, Works of Drainage, Irrigation and Water supply, Lighthouses, River, Harbour and Sea Works.

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IV. *Practical Mechanics.*

In this course of study the analytical principles of Statics and Dynamics are applied to the determination of the conditions of the equilibrium and stability of structures in general, and to the investigation of the motion of rigid bodies; particular attention being paid to the estimation of stress in roofs and bridges, the resistance of dams and retaining walls, and to the theory of work and the motion of machines.

V. *Principles of Mechanism.*

The Lectures in this subject are designed to afford the Student an insight, (1) into the principles of the various elementary contrivances employed by mechanicians to communicate and convert motion of one kind into another, apart from the consideration of *force*; and (2) into the mode of combining such simple forms in the construction of different machines, as exemplified in the Steam Engine, Lathe, Drill, Planing Machines, &c.

The Lectures are illustrated by means of a collection of working models.

VI. *Designing and Estimates.*

The instruction given under this head is intended to enable the Student to apply practically such knowledge as has been obtained from the different Courses of Lectures; and consists in the design, specification, and estimating for such works as are usually undertaken by the Engineer.

Each Student works independently under the personal supervision of the Professor, and makes such drawings and calculations as would be needed were the structure designed to be actually carried out.

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2. Assaying, Mining and Metallurgy.

Professor.—B. J. Harrington, B.A., Ph. D.

I. Use of the Blowpipe and Assaying.—(Middle Year.)

Use of the Blowpipe.—The object of this course is to enable Students, by means of the blowpipe and a few simple reagents, to detect the nature of various minerals or ores. On account of the small amount of apparatus required, and the rapidity with which accurate results may be arrived at, a knowledge of this subject will be found most useful to those engaged in geological or other field-work.

Assaying.—The course in Assaying includes lectures and practical work. Assays are made, by various methods, for gold, silver, copper, lead, iron and other metals. Examinations are also made of coal, peat, clay, &c.

II. Mining and Metallurgy.—(Senior Year.)

Mining.—Among the most important subjects taken up in this Course, the following may be mentioned:—Blasting and the nature and use of different Explosives; Quarrying; Hydraulic Mining and Sluicing; Boring and Boring Machinery; Sinking, Timbering, and Tubbing of Shafts; Driving and Timbering of Levels; Underground Conveyance and Hoisting; Drainage and Pumping; Lighting and Ventilation of Mines; Special Methods of Exploitation employed in the working of Metalliferous Deposits or of Coal-seams; Dressing of Ores by means of hammers, stamps, rollers, riddles, buddles, &c.

Metallurgy.—A short Course of lectures, illustrated by a series of Ores and Metallurgical Products. The general properties of the metals and the nature of fuels, fire-clays, &c., are first discussed; and afterwards, the more important metals and the methods of obtaining them from their ores; by wet or dry processes, taken up in detail.

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3. Practical Chemistry.

Professor.—Gilbert P. Girdwood, M.D.

This Course beginning in the first week of October will be conducted in the large and commodious Laboratory recently constructed for the Medical Faculty. It will include a general Course of Qualitative and Quantitative Analysis, adapted to the previous training of the Student; leading in the latter part of the Course to special studies adapted to his future pursuits.

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§ X. LIST OF TEXT-BOOKS AND BOOKS RECOMMENDED FOR REFERENCE.

COURSE OF CIVIL AND MECHANICAL ENGINEERING.

Text-books, required for the Classes.

First Year, Surveying.—Gillespie's Land Surveying.
Drawing.—Davidson's "Linear Drawing and Projection," (Cassel's Technical Manuals.)

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Second Year, Construction.—Rankine's "Civil Engineering."

Drawing.—Davidson's Practical Perspective or another to be chosen at the opening of the Session.

Third Year, Applied Mechanics.—Twisden's "Practical Mechanics."—Goodeve's "Elements of Mechanism."

COURSE OF MINING, METALLURGY AND ASSAYING.

Books of Reference on Mining and Ore-dressing.—

(1) Traité du Gisement et de la Recherche des Mineraux Utiles.—Burat.
(2) Ponson's Traité de l'Exploitation des Mines de Houille.
(3) Coal and Coal Mining.—Warrington Smyth.
(4) Transactions of the North of England Institute of Mining Engineers.
(5) Greenwell's Mine Engineering.
(6) Concentration and Chlorination.—Küstel.
(7) Rittinger's Aufbereitung,

Text-book on Metallurgy.—

Metals: their Properties and Treatment. Bloxam.

Books of Reference on Metallurgy.—

Percy's Metallurgy. Crooke's and Röhrig's Metallurgy. Phillip's Metallurgy. Bauerman's Metallurgy of Iron.

Books of Reference on Assaying.—

Mitchell's Manual. Kerl's Metallurgische Probirkunst.

Text-Books on Blowpipe Analysis.—

Brush's Determinative Mineralogy and Blowpipe, or Elderhorst's Blowpipe Analysis.

GOVERNMENT EXAMINATIONS FOR DOMINION LANDS SURVEYORS.

The following is an Extract from the Dominion Lands Acts:—

"ADMISSION OF DOMINION LANDS SURVEYORS."

"No person shall receive a commission from the said Board (of Examiners) authorising him to practice as a Dominion Land Surveyor until he has attained the full age of twenty-one years and has passed a satisfactory examination before the said Board on the following subjects, that is to say:—Euclid, first four books, and propositions first to twenty-first, of the sixth book; plane trigonometry, so far as it includes solution of triangles; the use of logarithms, mensuration of superficies, including the calculation of the area of right-lined figures by latitude and departure and the dividing or laying off land; a knowledge of the rules for the solution of spherical triangles; and of their use in the application to surveying of the following elementary problems of practical astronomy:

1. To ascertain the latitude of a place from an observation of a meridian altitude of the sun or of a star:

2. To obtain the local time from an observed altitude of the sun or a star:

3. From an observed azimuth of a circumpolar star, when at its greatest elongation from the meridian, to ascertain the direction of the latter.

He must be practically familiar with surveying operations and capable of intelligently reporting thereon, and be conversant with the keeping of field notes, their plotting and representation on plans of survey, the describing of land by metes and bounds for title, and with the adjustments and methods of use of ordinary surveying instruments, and must also be perfectly conversant with the system of survey as embodied in the "*Dominion Lands Acts*," and with the manual of stand ing instructions and regulations published from time to time for the guidance of Dominion Land Surveyors.

Candidates for examination for commissions as Dominion Land Surveyors may, at their own request, in addition to the foregoing, be examined as to the knowledge they may possess of the following subjects relating to higher surveying, qualifying them for the prosecution of extensive governing or topographic surveys or those of geographic exploration, that is to say:—

1. Algebra, including quadratic equations, series, and calculation of logarithms:

2. The analytic deduction of the formulas and series of plane and spherical trigonometry:

3. The plane co-ordinate geometry of the point, straight line, transformation of co-ordinates, circle and ellipse.

4. Projections, the theory of those usually employed in the delineation of spheric surface:

5. Method of trigonometric surveying, of observing the angles and calculating the sides of large triangles on the earth's surface, and of obtaining the differences of latitude and longitude of points in a series of such triangles, having a regard to the effect of the figure of the earth.

6. The portion of the theory of practical astronomy relating to the determination of the geographic position of points on the earth's surface, and the directions of lines on the same, that is to say:—

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Methods of determining latitude:—*a.* By circum-meridian altitudes. *b.* By differences of meridional zenith distance (Talcott's method.) *c.* By transits across prime vertical.

Determination of azimuth:—*a.* By extra-meridional observations. *b.* By meridian transits.

Determination of time:— *a.* By equal altitudes. *b.* By meridian transits.

Determination of differences of longitude:—*a.* By electric telegraph. *b.* By moon culminations.

7. The theory of the instruments used in connection with the foregoing, that is to say: The sextant or reflecting circle, altitude and azimuth instrument, astronomic transit, zenith telescope, and the management of chronometers; also of the ordinary meteorological instruments, barometers mercury and aneroid, thermometers ordinary and self-registering, anemometer, and rain gauge —and on their knowledge of the use of the same.

8. Elementary mineralogy and geology, so far as respects a knowledge of the more common characters by which the mineral bodies that enter largely into the compostion of rocks are distinguished, with their general properties and conditions of occurrence; the ores of the common metals and the classification of rocks; and the geology of North America so far as to be able to give an intelligent outline of the leading geological features of the Dominion:

Provided that the candidates desiring the above extended examination shall inform the Board thereof, when giving the notice called for by section eighty-three of the '*Dominion Lands Act*'."

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Lectures in the Department of Practical Science in the Faculty of Arts.

SESSION 1877-8.

JUNIOR YEAR.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
9					
10	Mathematics.	* French.	† Mathematics. * French.	* French.	Mathematics.
11	English.		English.		
12	Elementary Chemistry.	† Mathematics, ‖	Mathematics.	† Mathematics, ‖	English.
2	Drawing, to 4.30. P.M.	* German.	Field work to 5. (*c*) Drawing, (*a*)	* German.	Elementary Chemistry.
		Surv'ing. Drawing, to 4.30. P.M.		Drawing, to 4.30.	Field Work, (*c*) Drawing, (*d*)

MIDDLE YEAR.

9	* French.	Mathematics.	* German.	Mathematics.	* French.
10	* German ‡ Geology.		Mathematical Physics.		* German; ‡ Geology; †Math.
11	Mathematical Physics.	Zoology.	† Mathematics.	Zoology.	Mathematical Physics.
12	† Mathematics.	Experimental Physics.	‡ Geology, * French.	Experimental Physics.	Mensuration.
2	‡ Assaying, Drawing.	Drawing, to 4.30. (*d*)	‡ Assaying, Drawing, (*d*)	Surveying, (*d*)	‡ Assaying, Drawing.
3.30	Construction.			Drawing, (*d*)	Construction.

SENIOR YEAR.

9	‡ Geology, † Math. Phys.	Astronomy, (*a*); Analytic Geo	† Mathematical Physics.	Astronomy, (*a*)	‡ Geology. Analytic Geome-
10	Geology.	metry, and Calculus (*b*)	Practical Mechanics.	Drawing, or Field Work.	try. Calculus, (*b*)
11	* French.	* German.	Construction.	* German.	Geology.
12	Principles of Mechanism.	Experimental Physics.	Geology.	Experimental Physics.	* French.
2	Construction. ‡ Mining.	Designing, Plotting.	‡ Metallurgy, Designing, (*d*)	Designing, Plotting, (*d*)	† Math. Physics.
3		to 4.30.	to 4.30.	to 4.30.	
3.30					Designing to 3.30.† Mining. Construction.

‖ A class at this hour for Preparatory Year throughout the Session. The Professor of Mathematics may require Students of Junior Year to attend if deemed necessary.
* Students may take either French or German (*a*) First Term only. (*c*) During part of First Term only. (*d*) After close of Field Work only.
† Optional. (*b*) Second Term only. ‡ To Students in Mining Engineering and Assaying.

Students in Practical Chemistry will take that subject at 2 P.M., in the Middle Year, and Assaying at 2 P.M., in the Senior Year, and will take the Lectures in Botany in the Junior or Middle Year. The Professional Classes in Practical Science, commence on Oct. 1st, except the Field Work under the Lecturer in Surveying which begins, with the other Classes, on Sept. 15th, and the Experimental Physics which begin on Nov. 1st. The Field Work for the Senior and Middle Years will be done on the Saturdays (from 9 to 4) in the early part of the First Term; and during the Field Season there will be no lectures to these classes on the afternoons of Tuesday, Wednesday and Thursday.

Faculty of Medicine.

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The Principal, (ex-officio.)

Professors :—Campbell,
Scott,
Wright,
Howard,
McCallum,
Craik,
Fenwick,

Professors :—Drake,
Girdwood,
Ross,
Osler,
Roddick,
Godfrey,
Gardner.

Dean of the Faculty.—G. W. Campbell, A.M., M.D., LL.D.

Registrar and Treasurer.—R. Craik, M.D.

Demonstrator.—Francis J. Shepherd, M.D.

Assistant Demonstrator.—Rich. L. MacDonnell, B. A., M.D.

Curator of Museum.—Jas. C. Cameron, M.D.

Matriculation Examiner of the Faculty.—Professor H. Aspinwall Howe, LL.D.

The forty-fifth Session of the Medical Faculty of McGill University will be opened on Monday October, 1st 1877, with a general Introductory Lecture at 11 a.m. The regular lectures will commence on Tuesday the 2nd Oct., at the hours specified in the time-table, and will be continued during the six months following.

It affords the Faculty much pleasure to be able to announce that the beautiful and commodious new building erected by the Governors of the University for the use of the Medical Faculty, has been completed and is now occupied by the Faculty.

The class tickets for the various courses are accepted as qualifying candidates for examination before the Universities and Colleges of Great Britain and Ireland, the Medical Boards of the Army and Navy, and the College of Physicians and Surgeons of Ontario.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon

graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of Lower Canada.

To intending students desirous of information upon the best manner of pursuing their studies, the following suggestions are made by the Faculty.

The student is advised to pass the Matriculation Examination in March, so that his four years of pupilage may expire at the close of a winter session. A certificate of having passed such examination before the examiners appointed by the Colleges of Physicians and Surgeons of Ontario and Quebec, will be accepted by this University.

N. B. The Medical Council of Ontario now requires all students from that Province to pass their Matriculation Examination in Ontario before Pursuing their studies elsewhere.

While the University regulations permit a student to graduate after three years' attendance upon lectures, provided he furnish proof that he has studied one year in addition with a private practitioner, yet he is recommended to devote four sessions to systematic instruction, as less time is scarcely sufficient for acquiring a fair knowledge of the many subjects which compose the curriculum.

As daily bed-side instruction is essential to the student of medicine, the undergraduate is earnestly advised to spend at least the last two summers in availing himself of the opportunities afforded by the large hospitals—general and lying-in—of our city; in which, moreover, dresserships should be obtained.

Enregistration is necessary every Session. It is required upon entrance, or as soon afterwards as possible, and always before any class tickets are procured. The time fixed for closing the Register is annually on the 30th of November.

Class tickets are payable in advance, and if not taken out during the current session will not be granted after its expiration.

A Medical Session or *annus medicus*, consists of enregistration and attendance upon at least two six months' courses or one six months' and two three months' courses.

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COURSES OF LECTURES.

1. ANATOMY.—[Prof. Scott.] The importance of Anatomy, both descriptive and in its relations to Medicine and Surgery, is duly considered by the Professor, who employs chiefly the fresh subject in the illustration of the lectures, aided, however, by dried preparations, wax models, plaster casts of dissections, plates, &c., the full size of life.

The Dissecting Room, which is open from 8 a.m. to 10 p.m.—is large, well ventilated and supplied with every convenience, such as gas, water, &c., &c. It is under the direct supervision of the Professor of Anatomy aided by the Demonstrators. The Demonstrators are constantly in attendance during certain hours every day, to direct and instruct students in Practical Anatomy, and the Professor also daily visits the Room to superintend and examine Students engaged in dissection. Abundance of fresh material for dissection will be provided.

2. CHEMISTRY.*—[Prof. Craik.]—Inorganic Chemistry is fully treated: and a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the class. For experimental illustration, abundant apparatus is possessed by the Professor, among which may be enumerated, a powerful Air Pump—Oxy-Hydrogen Microscope—Polariscope—extensive series of Models of Crystals, Electrical and Galvanic apparatus, Steam engine, &c., &c.,

3. MATERIA MEDICA.—[Prof. Wright]—This course is illustrated from a cabinet of Pharmacological objects; by plates of Medicinal Plants [Wagner, Roque, Stevenson and Churchill]; by dried specimens; by carefully prepared Microscopical objects, &c., &c; Analytical experiments with the ordinary reagents are also shown, and diagrams with other illustrations are used.

4. INSTITUTES OF MEDICINE.—[Prof. Osler]—This course comprises Histology, Physiology, and General Pathology. The lectures are illustrated by apparatus, diagrams, plates, and Microscopic preparations of the various tissues, and by Pathological specimens from the Museum. Extra demonstrations are held every Saturday afternoon. Voluntary courses of three months each on Practical Physiology and Microscopy, are organized throughout the entire year.

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* Students are permitted, if desired, to be examined upon this branch separately, at the end of their second medical year, after having attended two six months' courses.

5. PRACTICE OF MEDICINE.—[Prof. Howard.]—The extensive series of plates contained in the Library, (Lebert, Cruveilhier, Carswell, Hope, Alibert, Willan, Bateman, &c.,) will be employed; also Morbid preparations and models of diseased parts.

6. SURGERY.—[Prof. Fenwick.]—Divided into Principles and Practice, including Surgical Anatomy and Operative Surgery, exhibited on the subject. The various surgical instruments and apparatus exhibited, and their uses and applications explained and practically illustrated.

7. MIDWIFERY.—[Prof. McCallum.]—Including diseases of women and children; illustrated by a series of drawings on a large scale, by humid preparations, by models in wax, by the use of the artificial Pelvis, and by cases in the wards of the Lying-in Hospital.

8. MEDICAL JURISPRUDENCE.—[Prof. Gardner.]—Includes Insanity and Toxicology. The modes of testing for poisons are exhibited, and post-mortem appearances illustrated by plates.

9. CLINICAL SURGERY.—[Prof. Roddick.]—The lectures in this course are in illustration of Surgical cases under observation in the Wards of the General Hospital. Bed-side instruction is followed up daily, and all operations are performed in the presence of the class. The lectures are illustrated by cases under surgical treatment, by plates, surgical apparatus, morbid specimens, models and the use of the microscope.

10. CLINICAL MEDICINE.—[Prof. Ross.]—Taught by lectures and at the bed-side—Physical Diagnosis is taught practically, and each pupil required to take part in it. Examination of the Urine, chemical and microscopical, explained and illustrated.

11. HYGIENE AND PUBLIC HEALTH.—[Prof. Godfrey.]—A course of twelve or more lectures will be delivered on this subject; and as it is one of great and increasing importance, all Students are earnestly recommended to attend.

12. BOTANY AND ZOOLOGY.—[Prof. Dawson.]—The course in Botany is illustrated by specimens, diagrams, models, and the microscope. Students have access without any additional fee to the lectures in Zoology in the Faculty of Arts, and to the Natural History Museum of the University and the Museum of the Natural History Society of Montreal.

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Prizes will be awarded at the end of each Session, to Students in Botany of the class of the previous Session, for the best *Named Collections* illustrative of the Flora of Canada. The collections, or duplicates of them to remain in the College Museum.

13. PRACTICAL CHEMISTRY.—[Prof. Girdwood.]—Thorough instruction is given in the different departments of Practical Chemistry in the splendid new Laboratory of the Faculty, under the personal supervision of the Professor. The course includes blowpipe manipulations, qualitative and quantitative analysis, toxicological investigations, &c., &c.

SUMMER COURSE OF PRACTICAL CHEMISTRY.—For the convenience of those students who pass the summer months in the city, a summer course of Practical Chemistry has been arranged, consisting of the same number of lectures and demonstrations, and being in every way equivalent to the usual winter course.

SUMMER SESSION.

In order that the unusual advantages afforded by the Hospitals and other Institutions of the city, for the practical study of different branches of the Profession may be rendered as fully available to Students as possible, a three months Summer Session has been established.

The Summer Session does not form a necessary part of the curriculum, but has been established to allow the student facilities for acquiring practical knowledge of disease, when his time is not otherwise occupied in attendance upon lectures.

Further particulars of the Summer Session will be found at the end of this announcement.

LIBRARY AND MUSEUM.

The Library contains upwards of 4,000 volumes, including the most useful books of reference, as well as the most elementary; the works of the older authors as well as the most recent. It is open to Students without charge, under necessary regulations for the care of the books. The Museum contains a large number of preparations, chiefly Pathological; also wax and papier-mache models.

HOSPITALS.

The Montreal General Hospital affords ample means for the instruction of Students in Clinical Medicine and Surgery. The daily number of beds occupied by patients averages from 130 to 140, and during epidemic visitations has reached a much higher number. The Governors have also erected an Hospital for Children, contiguous to the Reid Wing of the present building. The students have thus an opportunity of becoming familiar with nearly all the diseases of suffering humanity, and with the peculiarities imparted to them by infancy, adolescence, maturity and declining age.

The large number of out-door patients that are treated in the Hospital, averaging from sixty to seventy daily—supply illustrations of most of the diseases of infants and children, of very many of the eye and skin, and of those chronic and ill-defined ailments, which, as they do not require admission to the wards of an hospital, would not otherwise come under the observation of the student, although, on account of their variety and frequency, of great importance to the Physician.

The shipping contributes a great many examples of accidents and surgical cases.

Dr. Buller, late of the Royal Ophthalmic Hospital, London, Eng., has been appointed Ophthalmic and Aural Surgeon to the Hospital, giving to students an opportunity of becoming familiar with all classes of diseases of the Eye and Ear, and with the latest and most approved methods of treatment for their alleviation and cure.

The fee for a six months' ticket is Eight Dollars; for a perpetual ticket Twenty Dollars if paid in advance. Twenty-four Dollars if not paid in advance.

The Operating Room (used also for a lecture room) is so constructed as to suit the convenience of the students in obtaining a good view of the operations.

The University Lying in Hospital is under the direction of the Professor of Midwifery. Students who have already attended one course of his lectures, are furnished with cases in rotation; and they are advised to attend this Institution as much as possible during the Summer, when, as there are as many patients and not so many pupils

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as in winter, a large proportion of cases falls to the share of each. Moreover, in this way more attention can be given to their duties during the winter. The fee for a six months' ticket is Five Dollars.

By the kindness of the authorities of the Grand Trunk and other Railways, arrangements have been made by which certified students of this University will be granted return tickets from Montreal to any part of their lines at greatly reduced rates; the said tickets to hold good from the close of one session to the beginning of the next. Return tickets will also be granted for the Christmas vacation.

PAST SESSION.

The total number of students enregistered in this Faculty during the past session was 143, of whom there were from;

Ontario,	78	New Brunswick,	3
Quebec,	43	P. E. Island,	5
Nova Scotia,	1	West Indies,	2
United States,	11.		

The following gentlemen, 27 in number, have passed their Primary Examinations on the following subjects: Anatomy, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine and Botany and Zoology. Their names, and residences are as follows:

NAME.	RESIDENCE,
Beckstead, Morris	Grantly, O.
Bell, Robert	Montreal, Q.
Cameron, John D	Glengarry, O.
Chisholm, Alexander	Lochiel, O.
Fraser, John R	Hawkesbury, O.
Gardner, Henry H	Orillia, O.
Gibson, Wm. B	Dunham, Q
Greenwood, Fred. S	St. Catharines, O.
Guerin, James F	Montreal, Q.
Hutchinson, John A	Bluevale, O.
Howey, Wm. H	Delhi, O.
Irwin, John L	Ottawa, O.
McCann, John J. B.A	Milbury, Mass.
McCrimmon, John	Woodville, O.
McKinley, John K	Perth, O.
McNeill, Ernest	Montague, P.E.I.
Mills, Thos. W. M.A	Hamilton, O.
Neilson, Wm. J	Perth, O.
Pinsoneault, Bernard	Montreal, Q.
Riley, Oscar H	Franklin, Vt
Rutherford, Martin C	Waddington, N. Y.
Setree, Edward W	Prescott, O.
Smith, Daniel F	Listowel, O.
Stafford, Fred. J	Montreal, Q.
Vineberg, Hiram N	Montreal, Q.
Webster, Arthur D	Kentville, N.S.
Wright, John W. B.A	Cressy, O.

The following gentlemen, 19 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from this University. These exercises consist in examinations both written and oral on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Women and Children, Medical Jurisprudence and Hygiene,—and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital:—

NAME.	RESIDENCE.	THESIS.
Armstrong, George E.	Montreal, Q.	Hospital Reports.
Bell, James	North Gower, O.	Pathological Reports.
Boyle, Albert	Charlottetown, P.E.I.	Surgical Reports.
Brodie, John	North Georgetown, Q.	Hospital Reports.
Burland, Samuel C.	Philadelphia, U.S.A.	Acute Bronchitis.
Cannon, Gilbert	Almonte, O.	Pleurisy.
Cameron, Duncan H.	Perth, O.	Tubular Nephritis.
Cotton, Cedric L.	Cowansville, Q.	Hospital Reports.
Farley, James T.	St. Thomas, O.	Bloodless Operations.
Fraser, Alexander C.	Wallaceburg, O.	Malaria.
Gillis, John A. F.	Summerside, P.E.I.	Hospital Reports.
Greaves, Henry C.	Barbadoes, W.I.	Hydrophobia.
Jamieson, Alex. B.A.	Lancaster, O.	The Mind and the Nervous [System.
Lane, John A.	Prescott, O.	Surgical Cases.
Law, William K.	Richibucto, N.B.	Typhoid Fever.
Miner, Frank L.	Abercorn, O.	Placenta Prævia.
Oakley, William D	Plattsville, O.	Urinary Deposits.
Park, George A.	St. Marthé, Q.	Sanitary Science.
Smellie, Thos. S.T., M.A.	Fergus, O.	Pathological Reports.

Of the above named gentlemen, Messrs. Cotton and Fraser, are under age. They have, however, passed all the examinations and fulfilled all the requirements necessary for graduation, and only await their majority to receive their degree.

A member of last year's graduating class, Mr. R. W. Powell, Gold Medallist of his year, but who was not of age at the date of last year's Convocation, presents himself this year for his degree.

The following gentlemen have passed in Anatomy, Materia Medica and Chemistry:—

NAME.	RESIDENCE.
Kirk, George W.	Cornwall, O.
MacDonald, Malcolm C.	Glencoe, O.
McCrimmon, Milton	Ancaster, O.

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The following have passed in Theoretical Chemistry :—

Bell, W. D. M.	Kidd, J. A.	Prendergast, W. A.
Brown, J. L.	Lawford, J. B.	Scott, J. G.
Carman, J. B.	Lloyd, H. W.	Seymour, M. M.
Carman, P. E.	Lyford, C. C.	Shaw, W. F.
Gurd, D. F.	MacDonald, R. C.	Smiley, J.
Hanna, F.	Mattice, J. S.	Smith, John,
Hart, J. C.	McCullough, Geo.	Spencer, R.
Heard, C. D.	McDonald, J. A.	Stevenson, H.
Henderson, A.	McNee, Stuart	Sutherland, W.
Imrie, A. W.	Menzies, J. B.	Weagant, C. A.
Jamieson, C. J.	Oliver, G. H.	Wilson, J. M.

Students who have passed their examinations in Botany :—

CLASS I.

G. Dibblee, (1st Prize)	T. L. Brown,	R. J. Maas,
L. Migneault, (2nd Prize)	H. B. Small,	H. E. Poole,
D. J. Inksetter,	B. L. Riordan,	T. C. McArthur,
W. McEachran,	James Cahalan,	G. T. Ross,
W. K. Dulmage,	S. M. Lefevre,	T. Gray,
		W. R. Prime.

CLASS II.

G. C. Brown,	T. J. Church,	T. O. Stewart,
A. K. C. McCorkill,	F. W. Church,	E. H. Smith,
A. Ruttan,	R. T. E. MacDonald,	M. F. Prime,
D. K. Cowley,	G. H. Groves,	W. De Moulpied,
G. C. Hart,	F. W. Pulford,	A. K. Teller.

CLASS III.

M. McNulty,	W. C. McGillis,	G. D. Holcomb,
C. J. Glass, } *Aeq.*	W. J. Musgrove, } *Aeq.*	E. A. McGannon.
G. H. Snider, }	T. W. Servis, }	

MEDAL AND PRIZES.

The Medical Faculty Prizes are three in number :

1st. The Holmes Gold Medal, awarded to the student of the graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches and for his inaugural thesis.

2nd. A prize in books awarded for the best examination, written and oral, in the final branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the primary branches.

The Holmes Gold Medal was awarded to James Bell, North Gore, O.

The prize for the Final Examination was awarded to William Donald Oakley, Plattsville, O.

The prize for the Primary Examination was awarded to Hiram N. Vineberg, Montreal, Q.

The following gentlemen arranged in the order of merit, deserve honourable mention :—In the Final examination, Messrs. Cotton, Armstrong, Fraser, Gillis and Brodie.

In the Primary Examination, Messrs. Neilson, Gibson, Mills, Smith and Greenwood.

PROFESSORS' PRIZES.

BOTANY, - - - - - - - Dibblee and Migneault.

PRACTICAL ANATOMY.—Demonstrator's Prize in the Senior Class, awarded to John Andrew MacDonald and Thomas W. Mills, M.A., equal.

Those deserving honourable mention for care and assiduity, Messrs. Brown, Hart, Lawford, McCrimmon, equal, and Stevenson and Webster.

Junior Class prize awarded to Thomas Gray. Honourable mention, Messrs. McArthur, Gurd, Inksetter, Small and Groves.

EXTRACTS FROM THE REGULATIONS.

§ 1. *Courses of Lectures, Fees, &c.*

1st. Each Professor shall deliver at least five Lectures during the week except in the classes of Clinical Medicine and Clinical Surgery, in which only two Lectures shall be required; and in that of Medical Jurisprudence, if extended through six months, in which case three Lectures a week will suffice.

2nd. Each Lecture shall be of one hour's duration.

3rd. Every Professor shall occasionally examine his class upon the subjects treated of in his preceding Lectures, and every such examination shall be considered a Lecture.

4th. A roll of the names of the Students attending each class shall be called from time to time.

5th. All tickets which have not a certificate of attendance attached, shall be rejected when presented as testimonials previous to examination, unless the omission shall be satisfactorily accounted for.

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6th. The Fee for each class shall be $12, with the following exceptions; for that of Medical Jurisprudence, $10; for Botany and Zoology, $5; Practical Anatomy, $6. The class-fees are payable in advance.

7th. Any Student, after having paid the Fees, and attended two courses of any class, shall be entitled to a perpetual ticket for that class.

8th. The courses of all the classes, except those of Clinical Medicine, Clinical Surgery, Practical Chemistry, and Medical Jurisprudence, shall be of six months' duration, the classes of Clinical Medicine, Clinical Surgery and of Practical Chemistry, of three months' duration, Medical Jurisprudence and Botany of three months, in which case Five lectures a week shall be given; or of six months, in which case only three Lectures a week shall be required.

9th. The courses shall commence on the first week of October, and with the exception of a vacation at Christmas, shall continue to the end of March.

10th. The Matriculation Examination shall be that recommended by the Council for Medical Education and Registration of Great Britain. Examinations in conformity therewith, will be held the first Saturday in October and the last Saturday in March of each year. Applications may be made to the Registrar of the Faculty till the evening of the previous day. The requirements of the standard for Matriculation are:—"Compulsory—English Language, including grammar "and composition; Arithmetic, including vulgar and decimal fractions; Algebra, "including simple equations; Geometry, first two books of Euclid; Latin "translation and grammar;—and one of the following optional subjects:—Greek; "French; German; Natural Philosophy, including mechanics, hydrostatics, and "pneumatics."

Graduates in Arts of recognized Universities are not required to submit to the Matriculation Examination, and a certificate of having passed this Examination before the College of Physicians and Surgeons of Ontario will be accepted by this University.

§ 2. *Qualifications and Studies of Students and Candidates for the Medical Degree.*

1st. All Students desirous of attending the Medical Lectures, shall at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty, and procure from the Registrar a ticket of Enregistration, for which each Student shall pay a fee of $4; excepting in the Clinical Classes, in which enregistration for students of other Schools shall not be compulsory.

2nd. The said Register shall be closed on the last day of November, in each year, and no tickets obtained from any of the Professors shall be received without previous enregistration.

3rd. No one shall be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not either:—1st, have attended Lectures for a period of at least four six months' sessions in this University, or some other University, College, or School of Medicine, approved of by this University; or 2ndly, have studied medicine during at least four years, and during that time have attended Lectures for a period of at least three six months' Sessions, either in this University, or some other University, College, or School of Medicine, approved of by this University.

4th. Candidates for the final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz :—

Anatomy. *Chemistry.* *Materia Medica and Pharmacy.* *Institutes of Medicine.* *Principles and Practice of Surgery.* *Midwifery and Diseases of Women and Children.* *Theory and Practice of Medicine.* *Practical Anatomy.*	*Of which two Courses will be required, each of six months' duration.*
Clinical Medicine. *Clinical Surgery.*	*Of which two Courses will be required each of three months' duration.*
Medical Jurisprudence. *Botany and Zoology.* *Practical Chemistry.*	*Of which one Course will be required, of three months' duration.*

Provided, however that Testimonials equivalent to, though not precisely the same as those above stated may be presented and accepted.

5th. The Candidate must give proof by ticket of having attended during twelve months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University.

6th. He must also give proof by ticket of having attended for at least six months the practice of the University or other Lying-in Hospital approved of by this University, and of having attended at least six cases of accouchement.

7th. No one shall be permitted to become a Candidate for examination who shall not have attended at least One Session of this University, and one full course of all the branches included in its curriculum.

8th. Courses of less length than the above will only be received for the time over which they have extended.

9th. Every Candidate for the Degree must on or before the Fifteenth of February present to the Dean of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and also a Thesis or Inaugural Dissertation, written by himself, on some subject connected with Medical or Surgical Science, in the Latin, English or French Language. He must at the same time deliver to the Dean of the Faculty the following Certificate :—

MONTREAL,———18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise,) that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or, shall not be at that time) under articles as a pupil or apprentice to any Physician Surgeon, or Apothecary. [Signed,] A. B.

10th. The trials to be undergone by the candidate shall be :—

(1) The private examination of his Thesis as evidence both of Medical and general acquirements, followed (if approved) by its public defence.

(2) A general examination on all the branches of Medical and Surgical Science, oral, and by written papers.

(3) The Clinical Professors shall conduct the examinations of members of their classes at the bed-side, submitting to them cases for diagnosis and treatment

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in the wards of the Hospital ; they shall also in estimating the standing of members of their classes, and the number of Marks to be awarded, take into account the regularity of their attendance and the diligence and care they evince in reporting cases.

The examinations will be divided into Primary and Final, the former comprehending Anatomy, Chemistry, Materia Medica, Institutes of Medicine, and Botany or Zoology ; the latter—Practice of Medicine, Surgery, Midwifery, Clinical Medicine, Clinical Surgery and Medical Jurisprudence. It will be optional with the student to present himself for the Primary Examination at the end of the Third Session or the Third Year, for Botany at the end of the First Year and for Chemistry at the end of the Second Year.

11th. The following Oath or affirmation, will be exacted from the Candidate before receiving his degree.

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A———B———, Doctoratus in Arte Medica titulo jam donandus, Sancto coram Deo cordium scrutatore, spondeo ; —me in omnibus grati animi officiis, ergo hanc Universitatem ud extremum vitæhalitum, perseveraturum, tum porro, artem medicam, caute, caste et probe exercitaturum ; et quoad in me est, omnia ad ægrotorum corporum salutem conducertia, cum fide procuraturum ; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adst Numen.

12th. The Fee for the Degree of Doctor of Medicine and Master of Surgery shall be twenty dollars, to be paid by the successful candidate immediately after examination, together with a Registrarion Fee of one dollar.

13th. The money arising from the Fees of Graduation, as well as those of Enregistration, shall be applied to the enlargement of the Medical Library and Museum, and to defraying their expenses.

BOOKS RECOMMENDED TO STUDENTS.

ANATOMY.—Gray, Wilson, Ellis, Dublin Dissector, Sharpey and Quain.

CHEMISTRY.—Fownes, Miller, Roscoe.

PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.

MATERIA MEDICA.—Pereira's Manual by Farre, Bentley and Warrington.

INSTITUTES OF MEDICINE.—*Physiology.*—Kirke's Hand-Book, Dalton, Carpenter, Flint, Huxley. *Pathology.*—Williams' Principles of Medicine, Jones & Sieveking.

SURGERY.—Holmes' Surgery, Miller's do, Erichsen's do, Druitt's do.

PRACTICE OF MEDICINE.—Aitken, Wood, Watson, Barlow, and Flint.

MEDICAL JURISPRUDENCE.—Orfila, Medicine Legal ; Taylor's Jurisprudence, Guy's Forensic Medicine.

MIDWIFERY.—Churchill, Ramsbotham, Cazeaux.

———

N.B.—Boarding may be obtained at from twelve to sixteen Dollars per month.

Lectures in Medicine.--Session 1877-78.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	
ANATOMY,	9	9	9	9	9	.....	A.M.
MEDICAL JURISPRUDENCE,	9	.....	9	.....	9	.....	A.M.
SURGERY,	10	10	10	10	10	.....	A.M.
BOTANY*	.....	10	.....	10	.....	.....	A.M.
MIDWIFERY,	11	11	11	11	11	.....	A.M.
HOSPITAL,	12	12	12	12	12	12	NOON.
CLINICAL LECTURES,	.....	.....	12	.....	.....	12	NOON.
MATERIA MEDICA,	2	2	2	2	2	.....	P.M.
PRACTICAL CHEMISTRY,	.....	2	.....	2	.....	2	P.M.
INSTITUTES OF MEDICINE,	3	3	3	3	3	.....	P.M.
PRACTICE OF PHYSIC,	4	4	4	4	4	.....	P.M.
CHEMISTRY,	5	5	5	5	5	.....	P.M.

* With microscopic work at separate hours.

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SUMMER SESSION, 1877.

The Medical Faculty of McGill University established last year the first regular Summer Session, in which practical and demonstrative courses and systematic clinical instruction were given.

Forty Students availed themselves of the advantages offered, and the diligence with which the classes were followed showed how much such practical teaching is appreciated.

The Faculty feels that the time is come when the intermittent system, at present in vogue, of six months work and six months vacation, so prejudicial to the steady and continuous progress of the student, should be abandoned, and that at least nine months of each year should be spent in regular organized study. It is with this view that the Summer Session has been established, and the hope is here expressed that all students will endeavour to take one or two of these extra sessions, the fees for which have purposely been placed so low as to be almost nominal.

As is only natural, the advantages offered by the city of Montreal, for the practical study of Medicine and Surgery are unequalled in the Dominion. In the wards of the General Hospital there are always—and more particularly in the summer months when navigation is open—a large collection of interesting medical and surgical cases. In the out-door department there is a daily attendance of between 75 and 100 patients, which affords excellent instruction in minor surgery, routine medical practice, and diseases of children. The Eye and Ear Department, lately established, will afford to the student an opportunity of studying practically, under skilled direction, these important branches.

The attendance of the Medical Officers is systematic and punctual.

At the University Lying-in Hospital, obstetrical cases are furnished to the students in rotation.

The Faculty has much pleasure in announcing the following prospectus.

SUMMER SESSION. MAY 1ST, TO JULY 21ST, 1877.

CLINICAL INSTRUCTION AT BEDSIDE. — Montreal General Hospital.....	DRS. DRAKE and MACCALLUM.

A limited number of Dresserships and Clinical Clerkships may be obtained on application to the Attending and out-door Physicians.—DAILY, from 12 to 2.

MINOR SURGERY.—Bandaging, application of splints, hæmostatics, catheterism, &c. Six demonstrations of Operative Surgery on the Cadaver..... WEDNESDAYS, 10 a.m.	G. E. FENWICK, Prof. of Surgery.
DISEASES OF WOMEN.—Method of examining patient; use of speculum and uterine sound; disorders of menstruation; leucorrhœa, its causes and treatment; tumors of the uterus, displacements of uterus, &c., &c.—MONDAYS, 11 a.m.....	D. C. MACCALLUM, Prof. of Midwifery and Diseases of Women.
CLINICAL MEDICINE.—Lectures founded upon cases in the wards; physical examination of heart and lungs with demonstrations; the urine in disease.—TUESDAYS, 10 a.m.....	GEO. ROSS, Prof. of Clinical Medicine.
DISEASES OF CHILDREN.—Anatomical and Physiological peculiarities of infancy and childhood; infantile hygienics; modes of examination of sick children; peculiarities of symptoms; Therapeutics and dosage; consideration of the more common and important diseases of childhood.—THURSDAYS, 10.30 a.m....	WM. GARDNER, Prof. of Medical Jurisprudence.
MEDICAL AND SURGICAL ANATOMY.—Demonstrations in Brain; Sympathetic system; thorax and abdomen; hernia, inguinal and femoral; triangles of the neck; surface markings; bladder; urethra; perineum; larynx.—FRIDAYS, 10 a.m.....	F. SHEPHERD, Demonstrator of Anatomy.
OPHTHALMIC MEDICINE AND SURGERY.—Methods of Diagnosis (with Ophthalmological work); injuries of the eye, and their treatment; common forms of diseases of the eye, with clinical demonstrations; practical instruction in operations.—MONDAYS, 9 a.m....	F. BULLER, Lecturer on Ophthalmology.
ELECTRO-THERAPEUTICS.—Varieties of electricity; batteries; animal electricity and electro-physiology; electro-diagnosis; modes of application; the induced and constant current; Medical diseases in which electricity is useful; electrolysis and galvanic cautery.—SATURDAYS, 10.30 a.m.....	WM. GARDNER, Prof. of Medical Jurisprudence.
PRACTICAL PATHOLOGY.—Consisting of twenty demonstrations in the Autopsy-room of the Hospital. Students will make the post-mortems in rotation, and receive instruction in the method of performing them, and keeping record of their observations.—BI-WEEKLY, 1. p.m.....	WM. OSLER, Prof. of Physiology and Pathology.

All students desirous of attending the above course will be expected to register their names with DR. CRAIK, (Registrar of the Faculty), on or before the 15th of May and pay a fee of $10. The fees will be devoted to the extension and improvement of the Faculty's Library and Museum, to which all students can obtain access. Certificates of attendance in the various courses will be given.

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The following courses will also be conducted during the Summer, and may be taken by enregistered students:

PRACTICAL CHEMISTRY.—Including blowpipe manipulation, qualitative analysis, toxicological investigations, &c. This course is the same as, and may be taken in lieu of, the Sessional Course during the Winter.—Fee, $12.—MON. WED. and FRIDAYS, 2-5 p.m....	G. P. GIRDWOOD, Prof. of Practical Chemistry.
PRACTICAL HISTOLOGY.—Normal and pathological. A course of twenty-five Lessons. Microscopes, reagents, and material provided. Fee, $20..... TUESDAYS, THURSDAYS, and SATURDAYS, 2-5 p.m. Extra hour for Laboratory Work, MONDAYS, WEDNESDAYS, and FRIDAYS, 5-6 p.m.....	WM. OSLER, Prof. of Physiology and Pathology.

Faculty of Law.

The Principal (Ex-officio).

Professors :—Abbott.
Laflamme.
Carter.
Trenholme.
Wurtele.
Kerr.

Professors :—Doutre
Rainville.

Lecturers :—Archibald.
Lareau.
Hutchinson.

Dean of the Faculty.—Hon. J. J. C. Abbott, Q.C., D. C.L.
Acting Dean.—Professor Wm. Kerr, Q.C., D.C.L.
Registrar of the Faculty.—J. S. Archibald, B.A., B.C.L.
Matriculation Examiners of the Faculty.—Lecturers J. S. Archibald, B.A., B.C.L. and Edmond Lareau, B.C.L.

The Classes in Law will commence on Monday the First of October, 1877, and will extend to March 31st, 1878.

The Lectures of the Faculty will close on Friday the 1st of March, 1878, and the Examinations will be held in the William Molson Hall, McGill College Building, from 3 to 6 p. m., on the 7th, 8th, 11th, 12th, 13th, 14th, and 15th days of March, 1878.

The Lecture Rooms of the Faculty are situated in the Molson's Bank Chambers, in St. James Street

The complete course of study in this Faculty extends over three years ; but it may be shortened to two years, when the student matriculates in the third year of his indentures.

Students who avail themselves of the privilege of attending two years only, will nevertheless be required to pass an examination in the subjects comprised in the three years' course.

Matriculated Students who do not take the whole course are classed as Partial Students, and are not entitled to proceed to the Degree of B. C. L.

Occasional Students will be received without matriculation, for attendance on any particular series of Lectures.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their

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indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY.

FIRST YEAR.

Legal History	Lecturer LAREAU.
Civil Law:—	
Persons	Professor RAINVILLE.
Property	
Ownership	
Roman Law:—	
Institutes of Justinian, B. I.	Professor TRENHOLME.
Gaius, C. I.	
Maine, Chapters I. to IV.	
Civil and Commercial Law:—	
Obligations	Professor WURTELE.
Civil Procedure:—	
Introduction	Professor DOUTRE and Lecturer HUTCHINSON.

SECOND YEAR.

Legal Bibliography	Lecturer LAREAU.
Civil Law:—	
Rents	
Transaction	
Suretyship	
Civil Law:—	
Usufruct	Professor RAINVILLE.
Real Servitudes	
Gifts and Wills	
Substitutions	
International Law:—	Professor KERR.
Civil and Commercial Law:—	
Sales	
Roman Law:—	
Institutes of Justinian, B. II. and B. III. to Title 14.	Professor TRENHOLME.
Gaius, Chaps. 2 and 3	
Maine, Chapters V. to VIII.	
Commercial Law:—	
Partnership	Professor WURTELE.
Corporations	
Bills of Exchange	
Civil Procedure:—	
First Part	Professor DOUTRE and Lecturer HUTCHINSON.
Constitutional Law and Election Law	Lecturer ARCHIBALD.

THIRD YEAR.

Civil Law:—	
Privileges and Hypothecs	Lecturer LAREAU.
Prescription	
Imprisonment in Civil Cases	

Civil Law :—	
Successions	Professor RAINVILLE.
Marriage Covenants	
Dower	
International Law	Professor KERR.
Commercial Law :—	
Carriage of Persons	
Insurance	
Bottomry and Respondentia	
Roman Law :—	Professor TRENHOLME.
Institutes of Justinian, B. III. from Title 14	
Maine, Chapters IX and X	
Civil Law :—	
Mandate	
Loan	
Deposit	
Pledge	
Evidence	
Commercial Law :—	Professor WURTELE.
Merchant Shipping	
Affreightment	
Insolvency	
Civil Procedure	
Second Part	Professor DOUTRE. Lecturer HUTCHINSON.
Criminal Law and Procedure	Lecturer ARCHIBALD.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student, shall apply to he Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course. (Students are requested to call on the Registrar who will furnish them with the necessary forms.)

2. Candidates for Matriculation shall pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics and Ancient and Modern History, and the books upon which such examination shall be had, shall be from time to time fixed by the Faculty.

3. Students in Law shall be known as of the First, Second and Third Years and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year and those only, unless by special permission of the Faculty.

4. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special examination to be determined by the Faculty; and if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket, or tickets, for the class or classes they desire to attend.

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6. Students who have attended Collegiate courses of study in other Universities for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7 All Students shall be subject to the following regulations for attendance and conduct :—

(1) A Class-Book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said Class-Book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations ; and the Faculty shall after examination of such class-book, decide what students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required o each student. Professors will note the attendance immediately on the commence ment of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the student or report to the Faculty, as he may decide. While in the building, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the Class-rooms, or elsewhere in the building, will admonish the student ; and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honours, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building, will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

(5) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

8. At the end of every Session there shall be a general examination of all the Classes, under the Superintendence of the Professors, and of such other Examiners as may be appointed by the Corporation, which examination shall be conducted by means of printed questions, answered by the students in writing, in the presence of the Examiners. The result shall be reported as early as possible to the Faculty, which shall decide the general standing of the Students accordingly.

9. Each Professor shall deliver at least two Lectures in each week. Each Lecture shall be of one hour's duration ; but the Professors shall have the right from time to time to substitute an examination for any such Lectures.

10. No Student shall be considered as having kept a Session, unless he shall have attended regularly all the courses of Lectures, and shall have passed the

Sessional Examinations to the satisfaction of the Faculty, in four classes in the First Year and in five in the Second and Third Years.

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course or Courses of Lectures, but no distinction shall, in consequence, be made between the Examinations of such Students, and those of the Students regularly attending Lectures. No Student shall pass for the degree of B.C.L. unless he has prepared a Thesis either in French or English which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each student shall on or before the first day of February forward such Thesis to the Registrar of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope bearing the same *nom de plume* on it, and containing inside his name and the subject of his Thesis, and the envelope shall be opened in the presence of the Faculty after the Final decision shall be given on the respective merits of the several Theses.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be awarded to the Student who being of the Graduating Class, having passed the Final Examination, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the medal, which Examination shall include the subject of Roman Law.

14. Every candidate before receiving the Degree of B.C.L., shall make the following declaration :—

Ego A.B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The Fees exigible in this Faculty are as follows :—

Matriculation Fee	$ 5 00
Sessional Fee by Ordinary Students	20 00
Sessional Fee by Occasional or Partial Students, for each course	5 00
Graduation Fee, including Diploma and Case	10 00

Matriculation and Sessional Fees must be paid on or before Nov., 1st, and if not so paid the name of the Student shall be removed from the Books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3. Students already on the Books of the University shall not be required to pay any Matriculation Fee.

1. Every Candidate for the Degree of D.C.L. in Course, under Chap. VIII., Section 4, of the Statutes of the University, shall be required to pass within four years from his graduation as B.C.L., such examination as shall be prescribed by the regulations of the Faculty of Law ; unless he shall have graduated as a B.A. of this University, either in Course or *ad eundem*. And not less than two months before proceeding to the Degree of D.C.L., the Candidate shall deliver to the Faculty of Law twenty-five printed copies of a Thesis or Treatise upon a subject selected or approved by the Faculty ; such Thesis to contain not less than twenty five octavo pages of printed matter and possessing such a degree of literary and

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scientific merit as shall in the opinion of the Faculty justify them in recommending him for that Degree. And in addition to the foregoing qualifications, the Candidate shall pay to the Secretary of the Faculty annually during term for the retention of his name on the books of the Faculty, during the said period of twelve years, a fee of two dollars, to be added to the Library fund of the Faculty.

Except as regards the Thesis, this regulation applies only to those who have taken the degree of B. C. L. subsequently to October, 1873. The examination under the above rule is as follows :—

(1) *International Law* :—
Phillimore; Wharton, Conflict of Laws; Fœlix, Droit International Privé.

(2) *Roman Law* :—
Gaii Commentarii, IV. ; Pauli Sententiæ; Pomponii Fragmentum de origine juris D. 1. 2. ; Novellæ Justiniani, cxviii. cxxvii. ; Ortolan, Instituts de Justinien, Vol. I. ; Mommsen's History of Rome.

(3) *Constitutional Law.*—
Hallam, Constitutional History of England ; May, Constitutional History of England ; Mill, Representative Government; The British North America Act, and cases thereunder.

(4) *Philosophy of Law* :—
Ahrens, Cours de Droit Naturel ; Austin, Jurisprudence ; Markby, Elements of Law ; Maine, Ancient Law.

(5) *Droit Civil et Commercial.*—
Pothier, Obligations, Vente et Communauté ; Marcadé, Obligations, Vente et Communauté ; Pardessus, Droit Commercial.

The Examination will be written and oral ; and translation from the Latin, French or English texts, as well as familiarity with the subject, will be required.

Prizes, Honours and Standing.

Session 1876-7.

FACULTY OF LAW.

GRADUATING CLASS.

ELIZABETH TORRANCE MEDAL.—G. S. W. GOODHUE.
Second in General Standing.—JOHN D. PURCELL.
Prize for best Thesis.--PIERRE P. CHARETTE.

Standing in the Several Classes.

INTERNATIONAL LAW.--PROFESSOR KERR.

First, CHARETTE and MONK, equal.
Second, PURCELL.

BILLS OF EXCHANGE.--PROFESSOR WURTELE.

First, GOODHUE.
Second, MONK.

ROMAN LAW.—PROFESSOR TRENHOLME.

First, GOODHUE.
Second, MCCORKELL.

CRIMINAL LAW.—LECTURER ARCHIBALD.

First, GOODHUE.
Second, CHARETTE.

LEGAL HISTORY.—LECTURER LAREAU.

First, CHARETTE and GOODHUE, equal.
Second, PURCELL.

CIVIL PROCEDURE.--LECTURER HUTCHINSON.

First, GOODHUE and PURCELL, equal.
Second, CAPSEY.

SUCCESSIONS.—LECTURER ROBIDOUX.

First, GOSSELIN.
Second, GOODHUE.

SECOND YEAR.

Students who have passed the Sessional Examination for the second year :—ABBOTT, ADAM, BEAUCHAMP, BEAUDIN, BERTHELOT, BISSONNETTE, BROOKE, CRIMMEN, CROSS, CROTHERS, CORREGAN, DUFFY, FARIBEAULT, FAY, GAUDET, GRAHAM, KAVANAGH, LAVIOLETTE, LANCTOT, LEVY, MCKINNON, MCGOUN, MORIN, MIGNEAULT, MORRISON, PERRAS, POPE, TAYLOR.

GENERAL STANDING.--CRIMMEN, 1st Prize; MIGNEAULT, 2nd prize ; BROOKE, 3rd.

MCGILL UNIVERSITY LIBRARY

Standing in the Several Classes.

INTERNATIONAL LAW.—Professor Kerr.

First, Migneault, Professor's Prize.

Second, Abbott and Brooke, equal.

COMMERCIAL LAW.—Professor Wurtele.

First, Crimmen, Professor's Prize.

Second, Kavanagh.

ROMAN LAW.—Professor Trenholme.

First, Abbott, Brooke, Crimmin, Cross, Migneault, and Taylor.

Second, Duffy.

CONSTITUTIONAL LAW.—Lecturer Archibald.

First, Crimmen, Cross, and Migneault, equal.

Second, Bissonnette, Brooke, Duffy, and Taylor, equal.

LEGAL HISTORY.—Lecturer Lareau.

First, Crimmen and Migneault, equal.

Second Brooke.

CIVIL PROCEDURE.—Lecturer Hutchinson.

First, Crimmen.

Second, Brooke, Duffy, McKinnon, Migneault and Taylor, equal.

CIVIL LAW.—Lecturer Robidoux.

First, Taylor.

Second, Beaudin, Crimmen, Cross, and Gaudet, equal.

FIRST YEAR.

Students who have passed the Sessional Examinations for the Second Year :—Bampton, Busteed, Carter, Cornell, Chauret, Descarries, Decary A., Duchesneau, Ethier, Evans, Fleet, Haly, Lafontaine, Ledieu, Levasseur, Leblanc, Leet, Leveille, Maclean, Martineau, Macnaughton, Nicholls, Nantel, Pillet, Ross, St. Jean, Simard, St. Julien, Trudel.

GENERAL STANDING.—Bampton, 1st prize ; Nantel, 2nd. prize.

Standing in the Several Classes.

OBLIGATIONS.—Professor Wurtele.

First, Bampton and Levasseur, equal.

Second, Nantel.

ROMAN LAW.—Professor Trenholme.

First, Bampton.

Second, Evans and Fleet, equal.

LEGAL BIOGRAPHY.—Lecturer Lareau.

First, Bampton.

Second, Carter and Martineau, equal.

CIVIL PROCEDURE.—Lecturer Hutchinson.

First, St. Julien.

Second, Bampton, Nantel and Nichols, equal.

CIVIL LAW.—Lecturer Robideau.

First, Bampton, Trudel and St. Jean, equal.

Second, Chauret.

FACULTY OF MEDICINE.

James Bell, of N. Gower, Ontario, for Thesis and best Examination in all the branches of Study.—Holmes Gold Medal.

William Donald Oakley, of Plattsville, O., Prize for the best Examination in the Final Branches.

Students deserving honorable mention in the Final Branches:—Cotton, Armstrong, Fraser, Gillis and Brodie.

Hiram N. Vineberg, of Montreal, Q., Prize for the best Examination in the Primary Branches.

Students deserving Honourable mention in the Primary Branches:—Neilson, Gibson, Mills, Smith, and Greenwood.

George Dibblee and L. Migneault, Prizes in Botany.

John Andrew McDonald, and Thos. W. Mills, M. A., equal; Senior Prizes in Practical Anatomy.

Thomas Gray, Junior Prize in Practical Anatomy.

Deserving Honourable mention in Practical Anatomy.

Senior Class.—Brown, Hart, Lawford, and McCrimmin, equal;—Stevenson, Webster.

Junior Class.—McArthur, Gurd, Inksetter, Small and Groves.

PASSED IN ANOTOMY, MATERIA MEDICA AND CHEMISTRY.

George W. Kirk, Malcolm C. MacDonald, Milton McCrimmon.

PASSED THE EXAMINATIONS IN BOTANY.

Class I.—J. Dibblee, 1st prize; L. Migneault, 2nd prize; D. J. Inksetter, W. McEachran, W. K. Dulmage, T. L. Brown, H. Small, B. L. Riordan, James Calhaeane, S. M. Lefevre, R. J. Maas, H. E. Poole, J. F. McArthur, G. T. Ross, T. Gray.

Class II.—G. C. Brown, A. K. C. McCorklll, equal; A. Ruttan, D. K. Cowley, G. C. Hart, J. J. Church, F. W. Church, R. T. E. Macdonald, G. H. Groves, F. W. Pulford, J. O. Stewart, E. H. Smith, M. F. Prime, W. De Mouilpied, A. K. Teller.

Class III.—M. McNulty, C. J. Glass, G. H. Snider, W. C. McGillis, W. J. Musgrove, T, W. Serviss, G. D. Holcomb, E. A. McGannon.

PASSED IN THEORETICAL CHEMISTRY.

W. D. M. Bell, J. L. Brown, J. B. Carman, P. E. Carman, D. F. Gurd, F. Hanna, J. C. Hart, C. D. Heard, A. Henderson, A. W. Imrie, C. J. Jamieson, J. A. Kidd, J. B. Lawford, H. W. Lloyd, C. C. Lyford, R. C. MacDonald, J. S. Mattice, Geo. McCullough, J. A. McDonald, Stuart McNee, J. B. Menzies, G. H. Oliver, W. A. Prendergast, J. G. Scott, M. M. Seymour, W. F. Shaw, J. Smiley, John Smith, R. Spencer H. Stevenson, W. Sutherland, C. A. Weagant, J. M. Wilson.

MCGILL UNIVERSITY LIBRARY

FACULTY OF ARTS.

GRADUATING CLASS.

B. A. Honours in Classics.

CHARLES H. GOULD.—First Rank Honours and Chapman Gold Medal.

B. A. Honours in Natural Science.

MATTHEW H. SCOTT.—First Rank Honours and Logan Gold Medal.
SIDNEY C. CHUBB.—Second Rank Honours.

B. A. Honours in Mental and Moral Philosophy.

EUGENE LAFLEUR.—First Rank Honours and Prince of Wales Gold Medal.
ROBERT ROBERTSON.—First Rank Honours.
CALVIN E. AMARON.—Second Rank Honours.

B. A. Honours in English Language, Literature and History.

WILLIAM H. WARRINER.—First Rank Honours and Shakspere Gold Medal.

The Anne Molson Gold Medal for Mathematics and Natural Philosophy has not been awarded.

THIRD YEAR.

JAMES ROSS.—First Rank Honours in Mental and Moral Philosophy; First Rank General Standing; Prize in Classics; Prize in German.

JAMES T. DONALD.—First Rank Honours in Natural Science and Logan Prize; First Rank General Standing; Prize in Classics.

RANKINE DAWSON.—First Rank Honours in Mental and Moral Philosophy; First Rank General Standing.

W. S. STEWART.—First Rank Honours in Classics.

CHARLES S. PEDLEY.—First Rank Honours in Mental and Moral Philosophy and Prize.

HASTEWELL W. THORNTON.—First Rank Honours in Natural Science and Prize.

A. CLARENCE LYMAN.—Prize for collection of plants.

PASSED THE SESSIONAL EXAMINATIONS.

Ross (J.), Donald, Dawson, Thornton, Stewart, Pedley (C. S.), Torrance, Lyman (A. C.), Ewing, McFadyen, Graham, Guerin, Taylor.

SECOND YEAR.

WILLIAM MCCLURE.—(Lachute Academy.)—First Rank Honours in Mathematics and Prize; First Rank General Standing; Prize in French.

ROBERT EADIE.—(Brantford High School.)—First Rank General Standing; Prize in Botany; Prize in English; Prize in Logic.

ALEXANDER S. CROSS.—(Huntingdon Academy.)—First Rank General Standing; Prize in Logic.

WILLIAM D. LIGHTHALL.—(High School, Montreal.)—Prize in English.

PASSED THE SESSIONAL EXAMINATIONS.

Eadie, McClure, Cross, Howard, Lighthall, Stevens, Wood, McKibbin, Lane, Mercer, Allen, Redpath, McConnell, Robertson.

FIRST YEAR.

SIDNEY W. HUNTON.—(Ottawa Collegiate Institute.)—First Rank Honours in Mathematics and Prize; First Rank General Standing; Prize in Classics; Prize in History.

J. HERBERT DAREY.—(High School Montreal.)—First Rank Honours in Mathematics and Second Prize; First Rank General Standing; Prize in Classics; Prize in History; Prize in German.

DOUGALD CURRIE.—(Galt Collegiate Institute.)—First Rank General Standing; Prize in Chemistry, Prize in English; Prize in Hebrew.

WILLIAM A. MCKENZIE.—(Upper Canada College.)—First Rank General Standing; Prize in Classics; Prize in English.

HARCOURT J. BULL.—(High School, Montreal.)—First Rank General Standing.

PAUL T. LAFLEUR—(High School, Montreal.)—First Rank General Standing; Prize in French; Prize for English Essay.

PASSED THE SESSIONAL EXAMINATIONS.

Darey, Currie, Hunton, McKenzie, Bull, Lafleur, Gowanloch, Raynes, Cunningham (T. E.), Ogilvie; Craig and Molson, equal; Roberts, Scriver, Bayne (G. D.), Guertin, Larivière, Ami, Pillsbury, Alguire, McIntyre

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

GRADUATING CLASS.

WILLIAM J. SPROULE.—Certificate of Merit in Engineering; Prize in French.

WILLIAM T. THOMPSON.—First Rank Honours in Natural Science.

MIDDLE YEAR.

FRANK ADAMS.—(High School, Montreal.)—Professor's Prize in Practical Chemistry.

PHILIP D. ROSS.—(Mr. Shewan's School, Montreal.)—Prize in French; Prize in ZOOLOGY.

PASSED THE SESSIONAL EXAMINATIONS.

Civil and Mechanical Engineering.

Ross (P. D.); Boulden, Swan, Hall.

Practical Chemistry.

Adams.

JUNIOR YEAR.

WILLIAM F. COCHRANE.—(Mr. Haight's School, Montreal).—Prize in Surveying and Drawing.

PASSED THE SESSIONAL EXAMINATIONS.

Cochrane, Skaife, Smith, Foster.

PASSED FOR ENTRANCE INTO MIDDLE YEAR.

Richard McConnell, Student in Arts, Second Year.

MCGILL UNIVERSITY LIBRARY

PASSED FOR METEOROLOGICAL CERTIFICATES.

Class I.—Sproule, Jones, Thompson. *Class II.*—(None). *Class III.*—Walbank, Wardrop, Rogers. (*Not classed*).—Atwater.

Earl of Dufferin's Medals for a Prize Essay in History.

JOSEPH WILLIAM SPENCER, Bac. App. Sc., *Silver Medal.*

At the Examinations in September 1876, the following *Scholarships* and *Exhibitions* were awarded:—

THIRD YEAR.—GRAHAM and DONALD;—*W. C. MacDonald Scholarships.*
ROSS (JAMES);—*The Charles Alexander Scholarship.*
SECOND YEAR.—MCCLURE and EADIE;—*W. C. MacDonald Exhibitions.*
FIRST YEAR.—HUNTON, MCKENZIE, BULL;—*W. C. MacDonald Exhibitions.*
LAFLEUR (P. T.);—*T. M. Taylor Exhibition.*
YARNOLD;—*Jane Redpath Exhibition.*
DAREY;—*Governors' Exhibition.*

CHRISTMAS EXAMINATIONS, 1876.

ORDINARY COURSE IN ARTS.

GREEK.

THIRD YEAR.—*Class I.*—Ross (Jas.); Donald and Graham, equal; Stewart, Blakely. *Class II.*—McFadyen, Dawson, Lyman, Taylor, Ewing; Thornton and Torrance, equal; McKillop, McLaren. *Class III.*—Guerin, McOuat, Sweeny.

SECOND YEAR.—*Class I.*—Eadie, Stevens, Cross, McClure. *Class II.*—Howard and Mercer, equal; Lane, Wood, Robertson (Hy. McN.) *Class III.*—Allen, McConnell, Lighthall, Houghton, McKibbin, McLean, Redpath.

FIRST YEAR.—*Class I.*—Hunton and McKenzie, equal; Darey and Raynes, equal; Lafleur, Currie. *Class II.*—Bull; Gowanloch and Ogilvie, equal; Bayne and Scriver, equal; Anderson (Alex.) and Bennett, equal; Cook and Pillsbury and Roberts, equal; Molson and Ross, (And. G.), equal. *Class III.*—Black, Klock, York, Muir, Guertin, Cunningham, Alguire, Larivière, Cole, Macpherson, McIntyre.

LATIN.

THIRD YEAR.—*Class I.*—Graham and Ross (Jas.), equal; Stewart; Donald and Blakely, equal. *Class II.*—Guerin; Ewing and McFadyen, equal; Sweeny and Taylor, equal; Thornton; Lyman and McKillop, equal; *Class III.*—Torrance and McOuat, equal; McLaren.

SECOND YEAR.—*Class I.*—Eadie, Cross, McClure, Mercer, Stevens, Howard. *Class II.*—Robertson (Henry McN.), Lane, McConnell, Lighthall, Wood, Redpath. *Class III.*—Meighen, McLean, McKibbin, Allen, Houghton.

FIRST YEAR.—*Class I.*—Hunton; Darey and McKenzie, equal; Bull, Raynes, Lafleur, Currie. *Class II.*—Ogilvie, Molson, Macpherson, Ross, (Andrew G.); Cook and Scriver, equal; Bayne, Klock. *Class III.*—An-

derson (Alex.), Gowanloch, Black, Pillsbury; Alguire and Bennett, equal; Larivière, Muir; Cunningham and Cole, equal: Robertson (W. R.), Ami, Guertin.

ENGLISH LANGUAGE AND LITERATURE.

FOURTH YEAR.—*Class I.*—Warriner, Atwater, McGibbon. *Class II.*— None. *Class III.*—Chubb.

THIRD YEAR.—*Class I.*—Dawson and Stewart, equal; Graham. *Class II.*—Torrance, McKillop; Lyman and McOuat, equal; Thornton. *Class III.*—Guerin, Taylor.

FIRST YEAR.—*Class I.*—McKenzie, Currie, Lafleur, Bull, Darey, Hunton. *Class II.*—Gowanloch, Raynes; Ogilvie and Cunningham, equal; McIntyre, Black, Bayne, Cole, Bennet, Molson, Ami, Roberts, Klock, Larivière, Alguire. *Class III.*—Ross, Anderson, Pillsbury, York, Scriver, Cook, Macpherson, Muir, Campbell, Guertin.

MENTAL PHILOSOPHY.

FOURTH YEAR—*Class I.*—Warriner, Lafleur; Amaron and Scott, equal. *Class II.*—McGregor, Robertson (R.), McGibbon, Meyers, Anderson, Atwater, Forneret. *Class III.*—Barltrop, Baugh, Edwards, Hobbs.

MORAL PHILOSOPHY.

THIRD YEAR.—*Class I.*—Donald and Lyman, equal; Blakely and Ross (J.) equal. *Class II.*—Dawson, Thornton, McLeod (J. R.), Stewart; Godwin and McLaren (James), equal; Graham; Ewing and Guerin, equal; Torrance. *Class III.* McKillop; McFadyen and McOuat and Wright, equal; McLennan (F.), McLaren (D. C.), Orme, Penman, Nelson.

ELEMENTARY PSYCHOLOGY.

SECOND YEAR. — *Class I.* — Eadie, McClure, Allen, McConnell, Howard *Class II.*—Mitchell, Lighthall, Baugh, Stevens, Lane, McLaren (J.), Cunningham, McKibbin (R.), Edwards, Redpath. *Class III.*—Mercer, McLean and Penman, equal; Shearer, Meighen, Hobbs, Houghton, Wood, Robertson (H. McN.), Caverhill.

HEBREW.

SENIOR YEAR.—*Class I.*—None. *Class II.*—McLaren (J. F.). *Class III.*—McKibbin, McLean, Penman.

JUNIOR YEAR.—*Class I.*—Currie, Munro, Gowanloch, Nelson (T. A.), Eadie. *Class II.*—Mercer; Grant (R.) and Mitchell, equal; Arthur, Houghton, McKenzie. *Class III.*—Hyde, Bayne (G. D.); Anderson (A.) and Guertin, equal; York, Alguire; McIntyre and McNab, equal; Bayne (G. T.).

MATHEMATICAL PHYSICS.

FOURTH YEAR.—*Class I.*—Gould. *Class II.*—Amaron. *Class III.*—Anderson, Atwater, Forneret, Robertson (Robt.), McGregor (A. F.), Chubb.

THIRD YEAR.—*Class I.*—Ross (J.) *Class II.*—Dawson and Graham, equal; Donald, Thornton. *Class III.*—McFadyen, Stewart, Blakely, McOuat, Lyman (C.), Torrance (F.), McLaren (D. C.), Ewing, Guerin.

McGILL UNIVERSITY LIBRARY

MATHEMATICS.

SECOND YEAR.—*Class I.*—McClure, Stevens, McConnell. *Class II.*—Eadie, Robertson (H. McN.), Howard. *Class III.*—Cross, Wood, Shearer, Lighthall, Redpath, Meighen, Allen; Lane and Mercer, equal.

FIRST YEAR.—*Class I.*—Hunton, Currie, Darey; Cunningham and McKenzie, equal; Gowanloch, Bull, Lafleur. *Class II.*—Ogilvie, Alguire. *Class III.*—Larivière, Molson, Cook, Scriver (C. W.), Pillsbury, Ami, McIntyre, York; Anderson and Guertin, equal; Ross (A. G.), Raynes, Cole, Carrière, Roberts.

EXPERIMENTAL PHYSICS.

FOURTH YEAR.—*Class I.*—Lafleur (E.), Scott, Chubb, McGibbon. *Class II.*—Robertson (R.), Forneret, Gould. *Class III.*—Atwater.

THIRD YEAR.—*Class I.*—Ross (J.), Lyman (C.). *Class II.*—Dawson, Thornton, McLaren (D. C.), Blakely, Guerin, Stewart. *Class III.*—Torrance (F.); Donald and McOuat, equal; Taylor, Graham.

MINERALOGY AND PHYSICAL GEOLOGY.

FOURTH YEAR.—*Class I.*—Scott, Adams, Chubb, Anderson. *Class II.*—McGregor, McGibbon, Barltrop, Forneret. *Class III.*—Atwater, Livingston.

ZOOLOGY.

THIRD YEAR.—*Class I.*—Dawson and Donald, equal; McLaren (D. C.), Ross (J.), Lyman, Thornton, Ewing; Sweeny and Godwin, equal; Guerin. *Class II.*—Torrance, Wright, McKillop, McOuat, Taylor, McFadyen, Graham. *Class III.*—Miles, McMartin, Lemay.

BOTANY.

SECOND YEAR.—*Class I.*—McConnell, Howard, Eadie, Cross, McLaren (J. F.), Stevens, McClure. *Class II.*—Wood, Godwin, Allen, Mercer, McKibbon, McLean; Lighthall and Redpath, equal. *Class III.*—Shearer, Robertson, Lane, Houghton, Orme, Meighen.

CHEMISTRY.

FIRST YEAR.—*Class I.*—Currie, McKenzie, Gowanloch, Darey, Bull, Cunningham. *Class II.*—Ogilvie, Molson; Lafleur and Raynes, equal; Ross, Anderson and Hunton, equal; Scriver. *Class III.*—Guertin, Roberts, Hughes; Alguire and Pillsbury, equal; Campbell and Klock, equal; Black, Bennett, Bayne (G. D.), Robertson (W. R.), Cook, Muir, McIntyre, Macpherson, Arthur, Ami.

FRENCH.

THIRD YEAR.—*Class I.*—Guerin. *Class II.*—Lyman. *Class III.*—None.

SECOND YEAR.—*Class I.*—McClure, Lighthall, Cross. *Class II.*—Eadie and Howard, equal; Stevens, Meyers, McConnell, Lane; Redpath and Wood, equal. *Class III.*—Caverhill, Robertson, Meighen, Allen.

FIRST YEAR.—*Class I.*—Larivière, Lafleur, Darey, Guertin, McKenzie; Ami and Ogilvie, equal; Raynes, Carrière, Scriver, Bull. *Class II.*—Cook, Molson, Ross, Walker, Campbell, Cunningham, Roberts, O'Heir. *Class III.*—Macpherson and Muir, equal; Hughes, Hunton and Robertson, equal; Cole, Klock.

GERMAN.

THIRD YEAR.—*Class I.*—Ross (James). *Class II.*—Meyers. *Class III.*—None.
SECOND YEAR.—*Senior Division.*—*Class I.*—Cross. *Class II.*—Mercer. *Class III.*—None.

Junior Division.—*Class I.*—None. *Class II.*—None. *Class III.*—Caverhill.

FIRST YEAR.—*Class I.*—Darey, Ross (A. G.), Lafleur, Pillsbury. *Class II.*—Hunton, Bennett, Macpherson, Walker. *Class III.*—None.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

MECHANICS.

SENIOR YEAR.—*Class I.*—Walbank, Sproule, Jones, Wardrop. *Class II.*—Thompson, Rogers. *Class III.*—None.

DESIGNING AND ESTIMATING.
(*Written Examination.*)

SENIOR YEAR.—*Class I.*—Thompson, Sproule, Walbank, Wardrop, Jones. *Class II.*—Rogers. *Class III.*—None.

DESIGNING AND ESTIMATING (DRAWING.)

SENIOR YEAR.—*Class I.*—Rogers, Sproule, Walbank. *Class II.*—Jones, Thompson, Wardrop. *Class III.*—None.

ELEMENTS OF MECHANISM.

SENIOR YEAR.—*Class I.*—Sproule, Thompson, Walbank. *Class II.*—Jones, Rogers, Wardrop. *Class III.*—None.

CONSTRUCTION.

SENIOR YEAR.—*Class I.*—Wardrop, Walbank, Sproule and Thompson. *Class II.*—Jones, Rogers. *Class III.*—None.

CONSTRUCTION.

MIDDLE YEAR.—*Class I.*—Ross, Boulden. *Class II.*—Hall, Swan, Nelson. *Class III.*—Bolton.

ENGINEERING FIELDWORK.

MIDDLE YEAR.—*Class I.*—Hall and Nelson, equal. *Class II.*—Ross; Boulden and Swan, equal. *Class III.*—Bolton.

MENSURATION.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—Swan; Ross; Hall; Boulden. *Class III.*—Bolton.

DRAWING.

MIDDLE YEAR.—*Class I.*—Swan, Boulden, Hall, Ross. *Class II.*—Nelson. *Class III.*—Bolton.

JUNIOR YEAR.—*Class I.*—Cochrane. *Class II.*—Smith. *Class. III.*—Brown, Power, Robertson (W. F.); Evans; McConnell and Skaife, equal.

CHAIN SURVEYING.

JUNIOR YEAR.—*Class I.*—Cochrane. *Class II.*—McConnell, Power, Robertson (W.F.), Evans. *Class III.*—Brown and Smith, equal; Robertson (H.), Dudderidge, Foster, Skaife.

TORONTO UNIVERSITY LIBRARY

MATHEMATICAL PHYSICS.

SENIOR YEAR.—*Class I.*—Sproule. *Class II.*— None. *Class III.*—Wardrop; Jones and Rogers and Thompson, equal.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—Swan. *Class III.*—Hall, Ross (P. D)

MATHEMATICS.

MIDDLE YEAR.—*Class I.*— Ross (P. D.), Boulden, Swan *Class II.*— None. *Class III.*—Bolton, Hall, Adams.

JUNIOR YEAR.—*Class I.*— None. *Class II.*— Smith, Power, Dudderidge. *Class III.*—Cochrane, Evans, Brown.

EXPERIMENTAL PHYSICS.

SENIOR YEAR.—*Class I.*—Sproule. *Class II.*—Jones, Thompson. *Class III.*—Wardrop, Walbank, Rogers.

MIDDLE YEAR.—*Class I.*—Swan, Ross (P. D.). *Class II.*—None. *Class III.*—Adams, Boulden, Nelson, Hall.

MINERALOGY AND PHYSICAL GEOLOGY.

SENIOR YEAR.—*Class I.*—Sproule, Thompson, Rogers. *Class II.*—Jones; Wardrop and Walbank, equal.

ZOOLOGY.

MIDDLE YEAR.—*Class I.*— Ross (P. D.), Nelson, Swan. *Class III.*—Adams, Hall. *Class III.*—Boulden, Bolton.

CHEMISTRY.

JUNIOR YEAR AND MIDDLE YEAR IN PART.—*Class I.*—Cochrane. *Class II.*—Brown, Boulden. *Class III.*—Dudderidge and Power, equal; Foster, Robertson (W.F.); Skaife and Bolton, equal; Evans.

ENGLISH.

JUNIOR YEAR.—*Class I.*—None. *Class II.*—Brown, Foster. *Class III*—Robertson, Power, Evans, Skaife, Smith.

FRENCH.

SENIOR YEAR.—*Class I.*—Sproule. *Class II.*—None. *Class III.*—Walbank, Jones, Thompson.

MIDDLE YEAR.—*Class I.*—Ross (P. D.) *Class II.*—None. *Class III.*—Swan, Nelson, Adams, Hall.

JUNIOR YEAR.—*Class I.*—Skaife, Foster. *Class II.*—Cochrane. *Class III.*—Power, Brown, Smith, Robertson, Evans.

GERMAN.

SENIOR YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Rogers.

MIDDLE YEAR.—*Class I.*—Boulden. *Class II.*—None. *Class III.*—None.

JUNIOR YEAR.—*Class I.*—Foster *Class I.*—None. *Class III.*—Skaife.

PRACTICAL CHEMISTRY.

Class I.—Adams. *Class II.*—None. *Class III.*—None.

SESSIONAL EXAMINATIONS, 1877.

ORDINARY COURSE IN ARTS.

GREEK.

B. A. ORDINARY.—*Class I.*—Gould. *Class II.*—Atwater, Forneret, McGibbon, Anderson, Robertson (Robt.); — Amaron and McGregor, equal. *Class III.*—Chubb.

THIRD YEAR.—*Class I.*—Donald and Ross (Jas.) (*prizes*) and Stewart, equal;—Pedley (C. S.). *Class II.*—Graham, Thornton;—Dawson and McFadyen equal;—Ewing, Lyman, McKillop. *Class III.*—Torrance and McLaren equal;—Guerin and Sweeny and Taylor, equal.

SECOND YEAR.—*Class I.*—Eadie, McClure, Cross, Howard. *Class II.*—Lane;—Mercer and Stevens, equal;—Lighthall and Wood, equal;—McConnell and Robertson (Hy. McN.), equal;—Allen and McKibbin, equal;—*Class III.*—Redpath and Houghton, equal.

FIRST YEAR.—*Class I.*—Hunton, (*prize*); Darey and McKenzie, (*prizes*) equal;—Lafleur (P.T.);—Bull and Craig, equal;—Currie;—Raynes and Bayne, equal;—Gowanloch. *Class II.*—Molson, Roberts;—Scriver and Ogilvie equal;—Bennett;—Anderson and Guertin, equal;—Black and Ross (A. G.) and McNabb, equal. *Class III.*—Pillsbury, Macpherson;—Alguire and Lariviere, equal;—Ami, McIntyre, Cunningham.

LATIN.

B. A. ORDINARY.—*Class I.*—Gould. *Class II.*—McGibbon, Atwater, Amaron, Forneret;—Robertson (Robt.) and McGregor, equal;—Anderson. *Class III.*—Chubb.

THIRD YEAR.—*Class I.*—Ross (Jas.), (*prize*);—Donald (*prize*) and Stewart, equal;—Pedley (C. S.);—Graham and Guerin, equal. *Class II.*—Thornton, Taylor, McFadyen, Lyman, Torrance;—Sweeny and Ewing, equal;—McKillop. *Class III.*—McLaren.

SECOND YEAR.—*Class I.*—Eadie, McClure, Howard, Mercer, Lighthall, Cross, Stevens. *Class II.*—Lane;—McConnell and Robertson (Hy. McN.), equal;—Wood. *Class III.*—Redpath, McKibbin, Allen, Houghton.

FIRST YEAR.—*Class I.*—Darey, (*prize*);—Hunton and McKenzie, (*prizes*) equal;—Currie;—Lafleur and Raynes and Bull, equal;—Molson. *Class II.*—Craig, Gowanloch, Roberts;—Ogilvie and Ross (A. G.), equal;—Scriver and McPherson and Pillsbury and Bayne, equal;—Cunningham;—Black and Bennett, equal. *Class III.*—Guertin, Alguire, Lariviere, Anderson, McNabb, McIntyre, Ami.

HISTORY.

FIRST YEAR.—*Class I.*—Hunton, (*prize*);—Darey, (*prize*);—Ross (A. G.), Currie, McKenzie, Lafleur, Bull. *Class II.*—Gowanloch, Raynes, Molson;—Scriver and Bennett, equal. *Class III.*—Alguire;—Cunningham and Lariviere and Macpherson and Roberts and Cole and McNabb and Pillsbury and McIntyre, equal;—Bayne and Ami and Black and Craig and Robertson (W. K.), equal;—Guertin, Anderson, Ogilvie.

MCGILL UNIVERSITY LIBRARY

LOGIC, AND MENTAL AND MORAL PHILOSOPHY.

B. A. ORDINARY.—(*Mental and Moral Philosophy*) — *Class I.*—Lafleur. Robertson, Warriner. *Class II.*—Amaron. *Class III.*—McGibbon, McGregor, Anderson, Forneret.

OCCASIONAL STUDENTS IN FOURTH YEAR.—(*Mental Philosophy*)—*Class I.*—None. *Class II.*—Meyers. *Class. III.*—Barltrop, Baugh.

THIRD YEAR.—(*Moral Philosophy*)—*Class I.*—Pedley, (C. S.) (*prize*), Ross, Donald. *Class II.*—Dawson and Ewing, equal; Lyman, Thornton, Wright, Stewart, Torrance. *Class III.*—Willett, Orme, McFadyen, Graham and McKillop, equal; Guerin and Taylor, equal.

SECOND YEAR.—(*Logic*)—*Class I.*—Cross and Eadie, (*prizes*), equal;—Howard and McClure, equal;—Lighthall and McConnell, equal;—Robertson (H. McN.), Stevens. *Class II.*—Lane, Wood, Mercer. *Class III.*—Redpath, Allen, Baugh, Edwards, Caverhill, Hobbs, Cunningham, McKibbin.

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ENGLISH AND RHETORIC.

B. A. ORDINARY.—(*English Literature.*)—*Class I.*—Warriner, Atwater.

THIRD YEAR.—(*Rhetoric.*)—*Class I.*—Dawson; Stewart and Torrance, equal, McKillop, Graham. *Class II.*—Guerin, Thornton, Lyman. *Class III.* Taylor, Caverhill.

SECOND YEAR.—(*English Literature.*)—*Class I.*—Lighthall and Eadie, (*prizes*) equal; Cross, McClure. *Class II.*—Howard, Mercer, Lane, Stevens and Allen, equal, McKibbin. *Class III.*—Redpath, Wood, Robertson.

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FIRST YEAR.—(*English Language and Literature.*)—*Class I.*—McKenzie, Currie, (*prizes*); Bull and Mitchell, equal; Lafleur, (*prize essay*), Hunten and Darey, equal; Ross, Raynes, Roberts, Gowanloch, Cunningham. *Class II.*—Craig, Bennett, Molson, Scriver and Alguire, equal; Macpherson, McIntyre, Anderson, Cole, Ogilvie, *Class III.*—Pillsbury, Bayne, Campbell, Robertson.

FRENCH.

THIRD YEAR.—*Class I.*—Guerin. *Class II.*—Lyman. *Class III.*—None.

SECOND YEAR.—*Class I.*—McClure, (*prize*), Cross and Lighthall, (equal). *Class II.* Lane, Wood, Eadie, Howard, Meyers. *Class III.*—Stevens, Redpath, McConnell, Allen.

FIRST YEAR.—*Class I.*—Lafleur, (*prize*), Darey, Larivière, McKenzie; Bull and Guertin, (equal).
Class II.—Ami, Ogilvie, Roberts, Molson.
Class III.—Cunningham, Scriver, Raynes, Macpherson.

GERMAN.

FIRST YEAR.—*Class I.*—Darey (*prize*) and Ross, (A. G.), equal;—Hunton, Lafleur and Bennett, equal. *Class II.*—Pillsbury. *Class III.*—Macpherson.

SECOND YEAR.—*Class I.*—Meyers; Cross and Mercer, equal. *Class II.*—None. *Class III.*—Caverhill.

THIRD YEAR.—*Class I.*—Ross (James), (*prize*). *Class II.*—None. *Class III.*—None.

HEBREW.

SENIOR CLASS.—*Class I.*—None. *Class II.*—None. *Class III.*—McKibbin.

JUNIOR CLASS.—*Class I.*—Currie (*prize*),Gowanloch, Craig, Mitchell. *Class II.*—Anderson (Alexander). *Class III.*—Bayne (Geo. D.), McIntyre.

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MATHEMATICAL PHYSICS.

B. A. ORDINARY.—*Class I.*—Gould, Atwater. *Class II.*—None. *Cass III.*—Anderson and Robertson, equal; McGibbon, Amaron, McGregor, Forneret, Chubb.

THIRD YEAR.—*Class I.*—Ross (J.), Thornton. *Class II.*—Dawson, Donald. *Class III.*—Stewart, Torrance (F.), Graham, Pedley (C. S.); Blakely and McLaren, equal; Lyman (C.), Ewing, McFadyen, Guerin, Taylor.

MATHEMATICS.

SECOND YEAR.—*Class I.*—Cross, McClure; Eadie and Stevens, equal. *Class II.*—McConnell, Howard. *Class III.*—Lighthall, McKibbin, Wood, Robertson (H. McN.), Allen, Redpath, Lane, Mercer.

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FIRST YEAR.—*Class I.*—Hunton, Darey, Currie, McKenzie, Bull. *Class II.*—Cunningham, Gowanloch, Ogilvie, Lafleur. *Class III.*—Larivière, Ami, Guertin, Raynes, Bayne (G. D.), Cole, Craig; Alguire and Scriver, equal; Pillsbury, Molson, Roberts, McIntyre, Robertson (W. R.).

HONOUR COURSE.—SECOND YEAR.—*First Rank Honours.*—McClure, (*prize.*)

HONOUR COURSE.—FIRST YEAR.—*First Rank Honours.*—Hunton, (*prize*) ;—Darey, (*second prize*).

EXPERIMENTAL PHYSICS.

B. A. ORDINARY.—*Class I.*—Lafleur, Scott. *Class II.*—Atwater, Chubb. *Class III.*—Forneret, McGibbon.

THIRD YEAR.—*Class I.*—Dawson and Donald, equal; Lyman (C.). *Class II.*—Thornton, Torrance, Blakely, Ross (J.), Stewart. *Class III.*—Guerin Graham ; McLaren and Wellwood, equal ; Taylor.

NATURAL SCIENCE.

B. A. ORDINARY.—(*Geology.*)—*Class I.*—Scott, Chubb. *Class II.*—Barltrop, Forneret, Atwater. *Class III,*—Anderson, McGibbon, McGregor, Livingston.

B. A. HONOURS.—Scott, (*Logan Medal*) ; Chubb.

THIRD YEAR.—(*Zoology.*)—*Class I.*—Donald, Thornton, Dawson, Ross, Torrance, McFadyen, Godwin. *Class II.*—Ewing, Pedley, Lyman. *Class III.*,—Guerin, Wright, McKillop, McLaren, Sweeny, Graham, Taylor.

THIRD YEAR HONOURS.—Donald, Thornton.

SECOND YEAR.—(*Botany.*)—*Class I.*—Eadie, (*prize*) ; Cross, McClure, McConnel, Howard. *Class II.*—Lighthall, Stevens, Orme, Lane, Wood, Godwin, Mercer. *Class III.*—Allen; McKibbin and Redpath, equal:—Robertson.

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FRENCH AND HISTORY.—*Class I.*—Bland.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

SURVEYING.

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MIDDLE YEAR.—*Class I.*—Swan and Ross, equal;—Hall. *Class II.*—Boulden. *Class III.*—(None).

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ELEMENTS OF MECHANISM.

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MATHEMATICS.

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EXPERIMENTAL PHYSICS.

SENIOR YEAR.—*Class I.*—Sproule. *Class II.*—Wardrop, Walbank, Jones, Rogers, Thompson.

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Bull, Harcourt J.	Montreal, Q.
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Cole, Frederick M.	Montreal, O.
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Craig, James A.	Fitzroy Harbour, O.
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Redpath, William W.,	Montreal, Q.
Robertson, H. McN.	Barrington, N. S.
Shearer, William	Ottawa, O.
Stevens, William H.	Manilla, O.
Wood, Holton H.	Montreal, Q.

Third Year.

Blakely, Malcolm D.	Bristol, Q.
Dawson, Rankine	Montreal, Q.
Graham, John H.	Ormstown, Q.
Ewing, William	Melbourne, Q.
Guerin, Edmund	Montreal, Q.
Lyman, A. Clarence	Montreal, Q.
McFadyen, Allan L.	Brock, O.
McKillop, Ronald	Inverness, Q.
McLaren, David C.	Montreal, Q.
McOuat, John D.	Lachute, Q.
Pedley, Charles S.	Coldsprings, O.
Ross, James	Dewittville, Q.
Stewart, Wm. S.	Charlottetown, P. E. I.
Sweeny, James T.	Montreal, Q.
Taylor, Edward F.	Montreal, Q.
Thornton, Hastewell W.	New Richmond, Q.
Torrance, Frederick	Montreal, Q.

Fourth Year.

Amaron, Calvin E.	Berthier, Q.
Anderson, James A.	Tiverton, O.
Atwater, Albert W.	Montreal, Q.
Chubb, Sidney C.	Brooklyn, N. Y.
Forneret, George A.	Montreal, Q.
Gould, Charles H.	Montreal, Q.
Lafleur, Eugene	Montreal, Q.
McGibbon, Robert D.	Montreal, Q.
McGregor, Archibald F.	Manilla, O.
Robertson, Robert	Barrington, N. S.
Scott, Matthew H.	Eramosa, O.
Warriner, William H.	Montreal, Q.

Department of Practical and Applied Science.

JUNIOR YEAR.

Brown, Merrit A.	Aylmer, Q.	Power, John P.	Barrie, O.
Cochrane, William F.	Montreal, Q.	Robertson, William F.	Montreal, Q.
Dudderidge, James	Lachute, Q.	(2) Robertson, Henry McN.,	Barrington, N.B
Evans, Robert	Chelsea, Q.		
Foster, James R.	St. Simon, Q.	Skaife, Wilfred Theo.	Montreal, Q.
(2) McConnel, Richard G.	Chatham, Q.	Smith, W. Henry C.	Montreal, Q.
‡ Morkill, John T.	Montreal, Q.		

MIDDLE YEAR.

Adams, Frank	Montreal, Q	Nelson, T. Jno. M.	Montreal, Q.
Bolton, Thomas	Newmarket, O.	Ross, Phillip D.	Montreal, Q.
Boulden, Charles M.,	Millersburgh, Ky., U. S.	Scriver, John	Hemmingford, Q.
		Swan, John	Montreal, Q.
Hall, Richard,	Gatineau Mills, Q.		

SENIOR YEAR.

Jones, Thomas H.	Bradford, O.	Thompson, William T.	Cannington, O.
Rogers, Richard B.	Ashburnham, O.	Walbank, William McL.	Montreal, Q.
Sproule, William J.	Schomberg, O.	Wardrop, Norval,	Prescott, O.

‡ Partial Student.

(2) Second Year in Arts.

Partial and Occasional.

Arthur, Robert B.	Hillier, O.	Matheson, J.	
Baillie John K.	Aylmer, Q.	McFarland, James	Ottawa, O.
Bannerman, Donald	Carrick, O.	McLaren, James Fraser	Abernethy, O.
Barltrop, Alfred J.	Walkerton, O.	McLean, Charles	High Branch, P.E.I.
Baugh, William	Harrisburgh, O.	McLennan, Finlay.	
Bayne, George Thomas	Nepean, O.	McLeod, John R.	Bruce, O.
Bennett, James	Montreal, Q.	McMartin, H. J.	Montreal, Q.
Booth.		McNabb, Robert	Woodville, O.
Campbell, Lorne	Montreal, Q.	Meyers, Henry	Montreal, Q.
Carr, Joseph	Jasper, O.	Miles, J. G.	Charleston, Ill., U. S.
Caverhill, George	Montreal, Q.	Mitchell, John	Montreal, Q.
Church, John J.	Aylmer, Q.	Muir, John M. P.	Montreal, Q.
Cunningham, William B.	Glenarm, O.	Munro, John	Valleyfield, P. E. I.
Deveneau, Nelson	Oxford, Mass., U. S.	Nelson, Thos. A.	Nepean, O.
Donaldson, John G.	Vernon, O.	O'Heir, Horace J. E. I.	Montreal, Q.
Dyer, William T.	Cornwall, Eng.	Orme, Thomas H.	Birr, O.
Edwards, George	Stratford, O.	Paterson, Robert McD.	Montreal, Q.
Foord, Arthur H.	Montreal, Q.	Pedley, Hugh J. (B.A.)	Montreal, Q.
Godwin, William	Bayham, O.	Penman, John W.	Montreal, Q.
Grant, John P.	Metcalfe, O.	Rexford, Elson J. (B.A.)	Montreal, Q.
Grant, Robert	Metcalfe, O.	Richard, Louis F.	Little Cape, N. B.
Henderson, John C.	Brantford, O.	Sim, Rev. Alexander	Montreal, Q.
Henry, John	Montreal, Q.	Sliter, Thomas	Lansdowne, O.
Hobbs, Richard	Blair, O.	Sommers, Rev. Dr.	Montreal, Q.
Hughes, Silas J.	Wellington, O.	Taylor, Samuel J.	Cartwright, O.
Hyde, Richard	Montreal, Q.	Walker, Charles J.	Montreal, Q.
Lemay, Daniel	St. Martin, Q.	Wellwood, James	Montreal, Q.
Levesque, Alphonse	Montreal, Q.	Willet, George	Toronto, O.
Livingstone, James	Invermay, O.	Winslow, Charles	Rockland, Mass., U.S.
Lyman, H. H., (B.A.)	Montreal, Q.	Wright, James C.	Clifford, O.
Lockhart, R. Charles E.	Ormstown, Q.		

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FACULTY OF ARTS.

Undergraduates.

Bland, Salem G.	Lachute, Q.	McDonald, Simon	Quebec, Q.
Boswell, William A.	Quebec, Q.	Muir, Andrew C.	Quebec, Q.
Feales, Ebenezer	Quebec, Q.	Paterson, James T.	Windsor, Q.
Ferguson, James D.	Quebec, Q.	Walker, John	Quebec, Q.
Fletcher, Osmerod	Toronto, O.	Walker, Edward G.	Quebec, Q.
Hemming, Henry	Montreal, Q.		

Besides 60 Occasional Students.

SUMMARY.

Students in Law, McGill College,		78
" in Medicine "		143
" in Arts "	Undergraduates,	103
	Partial and Occasional,	61
" " Morrin College,	Undergraduates,	11
	Occasional,	60
Total number of Students,		456
Deduct entered in two Faculties,		8
		448
Teachers in training in Normal School,		119
Pupils in Model Schools,		340
Total Students and Pupils,		907

Passed the University Examinations.

SESSION 1876-7.

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B. C. L.*

Beaubien, Napoleon H.
Bergeron, Honore.
Capsey, George.
Charette, Pierre P.
Dansereau, Clement.
Dorion, Louis C. W.
Ethier, Marc.
Forget, Adelard.
Garon, Alphonse P.
Goodhue, Henry S. W.
Gosselin, Jean.
Knapp, Frederick A.
Lasalle, Lucien.
McCorkill, John C. G. S.
McDougall, John McC.
Monk, Frederick.
Palliser, Joseph.
Pelletier, Louis C.
Purcell, John.

PASSED THE PRELIMINARY EXAMINATION FOR THE DEGREE OF D. C. L.

Thomas Nichols, M.D., LL.B., B.C.L.

FACULTY OF MEDICINE.

PASSED FOR DEGREE OF M. D., C. M.*

Armstrong, George E.
Bell, James.
Boyle, Albert.
Brodie, John.
Burland, Samuel C.
Cannon, Gilbert.
Cameron, Duncan H.
Cotton, Cedric L.
Farley, James T.
Fraser, Alexander C.
Gillis, John A. F.
Greaves, Henry C.
Jamieson, Alex. B. A.
Lane, John A.
Law, William K.
Miner, Frank L.
Oakley, William D.
Park, George A.
Smellie, Thos. S. T., M.A.

PASSED THE PRIMARY EXAMINATION.*

Beckstead, Morris.
Bell, Robert.
Cameron, John D.
Chisholm, Alex.
Fraser, John R.
Gardner, Henry H.
Gibson, Wm. B.
Greenwood, Fred S.
Guerin, James F.
Hutchinson, John A.
Howey, Wm. H.
Irwin, John L.
McCann, John J., B.A.
McCrimmon, John.
McKinley, John K.
McNeill, Ernest.
Mills, Thos. W., M.A.
Neilson, Wm. J.
Pinsonneault, Bernard.
Riley, Oscar H.
Rutherford, Martin C.
Setree, Edward W.
Smith, Daniel F.
Stafford, Fred J.
Vineberg, Hiram N.
Webster, Arthur D.
Wright, John W., B.A.

* Arranged Alphabetically.

The following gentlemen have passed in everything but the Institutes of Medicine.

Kirk, George W.
McCrimmon, Milton.
Macdonald, Malcom C.

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FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B. A.

In Honours.

(Alphabetically arranged.)

First Rank.—GOULD, CHARLES H.
LAFLEUR, EUGENE
ROBERTSON, ROBERT
SCOTT, MATHEW H.
WARRINER, WILLIAM H.

Second Rank.—AMARON, CALVIN E.
CHUBB, SIDNEY C.

Ordinary.

(In order of merit.)

(1). *McGill College.*

Class I.—ATWATER, ALBERT W.
Class II.—MCGIBBON, ROBERT D.
FORNERET, GEORGE A.
ANDERSON, JAMES A.
Class III.—MCGREGOR, ARCHIBALD F.

(2). *Morrin College.*

Class I.—BLAND, SALEM G.

PASSED THE INTERMEDIATE EXAMINATION.

Class I.—EADIE, MCCLURE, CROSS, HOWARD.
Class II.—LIGHTHALL, STEVENS, MCCONNELL.
Class III.--MCKIBBIN, ALLEN, LANE, MERCER, WOOD, ROBERTSON (H. MCN.), REDPATH.

PASSED FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

Course of Civil and Mechanical Engineering.

(In order of merit.)

SPROULE, WILLIAM J.
WARDROP, NORVAL.
THOMPSON, WILLIAM T.
WALBANK, WILLIAM MCLEA.
JONES, THOMAS H.
ROGERS, RICHARD B.

BACHELORS OF ARTS PROCEEDING TO THE DEGREE OF M. A.

ARCHIBALD, JOHN S., B. A.
LAING, ROBERT, B.A.

MASTER OF ARTS PROCEEDING TO THE DEGREE OF LL.D.

GILMAN, FRANCIS E., (M. A.)

Graduates of the University.

DOCTORS OF DIVINITY.

* Bethune, Rev. John, (ad eundem) 1843. * Falloon, Rev. Daniel, [Hon.].1844

DOCTORS OF LAWS AND OF CIVIL LAW.

* Abbott, Christopher, B. C. L. [D. C. L., in course].....1862
Abbott, Hon. J. J. C., B. C. L., [D. C. L., in course].....1867
* Adamson, Rev. Wm. A., [D.C.L., hon].....1850
Badgley, Hon. Wm. A. [D. C. L. hon].....1843
Bancroft, Rev. C., D. D. [LL.D. hon].....1870
Bond, Rev. Wm. M.A. [LL.D. hon]...1870
Browne, Dunbar, M. A., B. C. L. [D. C. L. in course].....1871
Campbell, George W., M. A., M.D., [LL.D. hon].....1875
Chamberlin, B., M. A., B. C. L. [D. C. L. in course].....1867
Chauveau, Hon. Pierre J. O., [LL.D. hon].....1857
Cordner, Rev. John, [LL.D. hon]...1870
Cornish, Rev. George, M.A., [LL.D. in course].....1872
Davidson, Charles Peers, M. A., B.C.L. [D.C.L. in course].....1875
* Davies, Rev. Benjamin, Ph. D. [LL.D. hon].....1856
Dawson, John William, M. A., [LL.D. hon].....1857
DeSola, Rev. A., [LL.D. hon]..... 1858
Douglas, Rev. Geo. [LL.D. hon]...1870
Doutre, Gonsalve, B.C.L. [D.C.L. in course].....1873
* Falloon, Rev. D., D.D., [LL.D. hon].....1862
Gilman, Francis E., M.A., B.C.L., [LL.D. in course].....1877
Girouard, Desiré, B.C.L., [D.C.L. in course].....1874
* Head, Right Hon. Sir Edmund W., Baronet, M.A., [LL.D. hon]..1863
Hemming, Edward J., B.C.L., [D.C.L. in course].....1871
* Holmes, Andrew F., M. D., [LL.D. hon].....1858
Howe, Henry A. M.A., [LL.D. hon].....1870
Hunt, T. Sterry, M.A., [LL.D. hon].....1865
Kerr, William H., [D. C. L. in course].....1873
Kirby, James, M. A., B. C. L. [D.C.L. in course] [LL.D. in course].....1874
Laflamme, R. G., B.C.L. [D.C.L. in course].....1873
Lawson, G., Ph. D., [LL.D. hon]...1862
* Lafrenaye, P. R., B.C.L., [D.C.L. in course].....1873
Leach, Rev. Wm. T., M. A., [D.C.L. hon].....1849
[LL.D. hon].....1857
* Logan, Sir William E., Kt., [LL.D. hon].....1856
* Lundy, Rev. Francis, [D.C.L. hon].....1843
Lyall, Rev. W., [LL.D. hon].....1864
MacVicar, Rev. D. H., [LL.D. hon]..1870
Meredith, Edmund A., B.C.L., [LL.D. hon].....1857
Miles, Hy. H., M.A., [LL.D. hon]..1866
Morris, Alexander, M.A., B.C.L. [D.C.L. in course].....1862
Rollitt, Albert K., LL.D., London Univ. [LL.D. ad eun].....1871
* Smallwood, Charles, M.D., [LL.D. hon].....1856
* Smith, William, [LL.D. hon].....1858
* Valieres, de St. Real, Hon. J. R. [D.C.L. hon].....1844
Wickes, Rev. W. D., [LL.D. hon]..1868
Wilkes, Rev. Henry, M.A., D.D., [LL.D. hon].....1870

* Deceased.

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* Anderson, John C....1865
Archer, Thomas....1869
Ardagh, Johnson....1869
Armstrong, George E....1877
* Arnoldi, Daniel....[Hon]....1847
Atkinson, Robt....1862
Ault, Alexander....1860
Ault, Charles....1855
Ault, James F....1854
Ault, Edwin D....1868
Austin, Fred. John....1862
Aylen, John....1857
Aylen, James....1863
Backhouse, John B....1870
Bain, D. S. E., Staff Surgeon Maj..1868
Bain, Hugh U....1875
Baird, James....1870
Baker, Albert....1848
Barclay, George....1870
* Barnston, James....[ad eun]...1856
Battersby, Charles....1861
Baynes, Donald M.A....1876
Baynes, George Aylmer....1869
Beattie, David....1862
Beaudet, Alfred....1865
Beaudry, Lewis H....1871
† Bell, James....1877
Bell, John M.A....1866
Bell, Robt. W....1873
Bellew, Alfred....1852
Bergeron, Joseph....1870
Bergin, Darby....1847
Bessey, William E....1863
Bender, Prosper....1865
Benson, Joseph B....1875
Bibeau, Jean G. J....1843
Blackader, Alex. D., B.A....1871
Blacklock, John J....1851
* Blanchet, J. B....1863
Blair, Robt. C....1865
Bligh, John W....1865
Bogart, Irvine....1859
Bomberry, Geo. E....1875
Boulter, George Henry....1852
* Boyer, Lewis....1842
* Boylan, Andrew A....1857
Boyle, Albert D....1877
* Bowman, William Edward....1860
Bower, Silas J....1865
* Bradley, William....1869
Brathwait, Francis H....1863
Brandon, John....1867
Breslin, William Irwin, Asst. Surgeon, 46th Regiment of Line....1847
Brigham, Josiah S....1848
Brissett, Henry R....1871
Bristol, Ames S....1850
Brodeur, Alphonse....1863
Brodie, John....1877
Brooks, Samuel T....1851
Brouse, William H....1847
Brossard, J. B. J....1875
Brown, Peter E....1863
Brown, Harry....1873
Browne, Arthur A., B.A....1872
Browse, Jacob E....1861
Bruneau, Adolphe....1853
* Bruneau, Oliver T....[Hon]....1843
Bruneau, Onesime....1851
Bryson, William G....1867
Rucke, Richard Maurice....1862
Bucke, Edward H....1852
Buckle, John M. C....1869
Buckley, William P....1870
Bull, George Joseph....1869
Bullen, Charles F....1864
Burgess, John A....1868
Burch, Benjamin T....1865
Burland, John H....1863
Burland, Samuel C....1877
Burland, William B....1872
Burland William H....1876
Burrows, Philip....1866
Burnham, Robert Wilkins....1860
Burns, Alfred J....1854
Burritt, Horatio C....1863
Butler, George C....1865
* Buxton, John N....1849
Cameron, Duncan H....1877
Cameron, James C....1874
Campbell, Donald Peter....1862
Campbell, Francis Wayland....1860
Campbell, G. W., M.A.,...[ad eun]1843
Campbell, James....1876
Campbell, Samuel....1866
Campbell, John....1869
Cannon, Gilbert....1877
Carmichael, Duncan A....1873
Carey, Augur D. L....[ad eun]...1864
Cassidy, David M....1867
Cassidy, John F....1865
Carroll, Robert W. W....1859
Carson, Augustus....1843
Carter, Samuel A....1859
Casgrain, Charles E....1851
Cattanach, Andrew J....1871

Chagnon, Vinceslaus G. B.....1861
* Challiner, Francis.....1849
Cherry William.....1869
* Chesley, George Ashbold.....1862
Chevalier, Gustave.....1860
Chevalier, Napoleon E.....1873
Chipman, Clarence J. H., B.A.....1868
Christie, George H.....1874
Christie, John B.....1865
Christie, Thomas.....1848
Christie, John H.....1875
* Church, Charles Howard.....1862
Church, Clarence R.....1867
Church, Coller M.....1855
Church, Levi R.....1857
Church, Mills Kemble.....1864
* Church, Peter H.....1846
Clark, Octavius H. E.....1870
Clark, Wallace B. A.....1871
Clark, Richard A.....1870
Clark, Fincastle G. B.....1876
Clemesha, John Wordsworth.....1867
Clement, Victor A.....1869
† Cline, John D., B.A.....1874
Cluness, Daniel.....1870
Codd, Alfred.....1865
Collins, Charles W.....1869
Colquhoun, George.....1876
Comeau, John B.....1870
Cook, Guy R.....1876
Cooke, Charles H.....1866
Cooke, Herman L.....1867
Cooke, Sidney P.....1869
Cooke, William H.....1876
Copeland, William L.....1872
Corbett, Augustus M.....1854
Corbett, William H.....1854
Corlis, Josiah.....1869
Carson, John.....1866
* Cowley, Thomas McJ.....1870
Cox, Frank.....1069
Coyle, Henry W.....1876
Craig, Thornton.....1876
Craik, Robert.....1854
Cram, Daniel C.....1872
* Crawford, James.....[ad eun]...1854
Cream, Thomas N.....1876
Crichton, Stuart.....1865
Crothers, William.....1876
* Culver, Joseph R.....1848
* Cunynghame, W. C. Thurlow...1858
Cutter, Frederick A.....1873
Daly, Guy D. F.....1868
Dansereau, Charles.....1842
Dansereau, Charles.....1869
Dansereau, Pierre.....1855
D'Avignon, Fred. F.....1871
* Dease, Peter Warren.....1847
DeBonald, W. S.....1862
DeBoucherville, Charles B.....1843
DeGrosbois, T. B.....1860
Demorest, Durham, G. G.....1852
Desaulniers, Antoine A.....1863
DeCelles, Charles D.....1841
Depuis, Joseph G. P.....1856
Dice, George.....1864
* Dick, James R.....1842
Dickinson, James J.....1846
* Dickinson, George.....1867
Dickson, William W.....1863
Digby, James Winnit.....1866
Dodd, John.....1843
Donnelly, Charles H.....1866
* Dorion, Severe.....1843
* Dorland, Enoch P.....1850
Dorland, James.....1875
Dougan, William.....1867
Douglass, James.....[Hon].....1847
Drake, Joseph M.....1861
Dubuc, Charlemange.....1864
* Duckett, Stephen.....1853
Dowling, John F.....1875
Duckett, William A.....1859
Dufort, Thadee A.....1865
Duhamel, Louis.....1860
Duncan, George.....1866
Duncan, Gideon M.....1871
Duncan, George C.....1875
Duncan, James S.....1853
* Duncan, John.....1871
* Dunn, William Oscar.....1843
Dunsmore, John M.....1870
Easton, John.....1852
Eberlé, Harry A.....1876
Edwards, Eliphalet G.....1855
Edwards, Oliver C.....1873
Elkinton, Arthur G., Asst. Surgeon Scots Fusileer Guards.....1862
Ellison, Saram R.....1873
Emery, Gordon J.....1857
Emery, Allard.....1866
English, T. F.....1858
Erskine, John.....1860
Ethier, Calixte.....1867
Evans, Griffith.....1864
Ewing, William.....1874
Falkner, Alexander.....1866
Falls Samuel R.....1875
Farewell, G. McGill.....1872
Farewell, W. G.....1868
Farley, James T.....1877
Farley, John J.....1873
Faulkner, George W.....1871
Fenwick, George Edgeworth.....1847
Fergusson, Alexander A.....1864
Fergusson, Alex. A.....1866
Finlayson, John.....1834
Finnie, John T.....1869
* Fisher, John.....1848
Fitzgerald, James.....1865
Fortin, Pierre.....1845
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Garvey, Joseph.....1852
Gardner, Matthew.....1871
Gardner, William 1867
Gascoyne, George E., Staff Asst. Surgeon 1861
Gaviller, Edwin A.....1873
Gauvreau, Elzear 1855
Gauvreau, Lewis H.....1836
Gendron, Thomas.....1866
Gernon, George W.....1872
Gibb, George D.....1846
Gibson, John B.....1855
* Gibson, Edward B.....1864
Gillies, John.....1867
Gilbert Henry L.....1876
Gillis, John A. F.....1877
Gilmour, Angus.....1868
* Giroux, Philippe.....1859
Girdwood, Gilbert P.....1865
Glenn, C. W. E.....1858
Godfrey, Robert 1845
Godfrey, Abraham C.....1865
Goodhue, P. J 1875
Goforth, Franklin. 1863
Gordon, Robert.....1868
Gordon, William Wallace.....1863
Graham, Charles E.....1866
Graham Henry.....1863
Graham, Kenneth D.....1875
Grant, Donald J.....1863
Grant ,James A.....1854
Grant, William 1867
Gray, John S.....1876
Greavis, Henry C.....1877
Greer, Thomas A.....1876
Grenier, L. P. A.....1863
Guest, Thomas A..... 1873
Gunn, James.....1861
Gustin, Willam Claud.....1863
Hagarty, Dan, M, J.....1868
*Hall, Archibad .....(ad eun).....1843
Hall, James B.....1866
Hall J. W.....1848
Halliday, James T.....1866
Hamilton, Andrew W.....1859
Hamilton, Charles S.....1868
Hamilton John R.....1871
Hamilton Rufus Edward.....1861
Hamel, Joseph Alexander.....1856
Hammond, James H.....1869
Hanover, William.....1875
Harding, F. W.....1868
Harkin, Henry.....1867
Harkin, William.....1858
Harkness, John.....1862
Harkness, Andrew.....1869
Hanington, E. B. C.....1875
Harrison, David Howard.....1864
Hart, Frederick W.....1835
Harvey, Wm. A 1874
Hays, James..... 1866
Hebert, P Zotique,.....1872
† Henderson, Alexander A.....1870
* Henderson, Peter.....1843
* Henry, Walter.....(Hon)...1853
* Henry, Walter J.....1856
Hervey, Jones J. G.....1856
Hethrington, Harry.....1872
Hickey, Charles E.....1866
Hickey, Samuel A., B. A.....1874
Hils, Joseph.....1873
Hingston, W. H.....1851
Hockridge, Thos G.....1874
Holden, Rufus..... 1844
Hollwell, John.....1868
* Holmes, Andrew F...(ad eun)...1843
Howard, James.....1867
Howard, Robert.....1872
Howard, R. Palmer.....1848
Howden, Robert.....1857
Howitt, William H.....1870
Howland, Francis .D.....1867
Hulbert, Edward Augustus 1860
Hubert, George W.....1859
Hume, William L.....1875
Hunt, Henry..... ...1876
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1. *Conditions of Admission and obtaining Diplomas.*

Candidates for admission into the Elementary School Class will be required to pass an examination in Reading, Writing, the Elements of Grammar, Arithmetic, and Geography ; and to produce the certificate, and sign the application, referred to in Articles 1 and 2 of the Regulations. Admission into each of the higher classes requires a knowledge of the subjects of the previous one.

Each Student must produce a certificate of good moral character from the clergyman or minister of religion under whose charge he has last been, and also testimony that he has attained the age of sixteen years. He will also be required to sign a pledge that he purposes to teach for three years in Some Public School in the Province of Quebec.

There will be a Semi-sessional Examination at Christmas, which all Students are required to pass, in order to continue in the classes.

At the close of the first year of Study, students may apply for examination for diplomas giving the right to teach in Elementary Schools ; and after two years' study, or if found qualified at the close of the first year, they will, on examination, be entiled to diplomas as teachers of Model Schools.

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Students having passed the examination for the Model School Diploma, with creditable marks in classics and mathematics, or having otherwise advanced to the requisite knowledge, may go on to the Academy Class, and, on examination, may obtain the Academy Diploma.

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2. *Privileges of Students.*

On complying with the above conditions, all students will be recognized as *Teachers-in-training;* and as such will be entitled to free tuition with the use of text books, and to bursaries in aid of their board, not exceeding $36.00 per annum in the case of those in the two first Classes. or $80.00 in the case of those in the Academy Class. should they be successful in obtaining the diploma at the final examination. A portion of this allowance will be advanced to such students as are not resident in Montreal, on their passing the semi-sessional examination at Christmas.

Under the regulations subjoined, and with the view of extending the benefits of the School to all parts of the country, those who reside at a distance of more than ninety miles from the city of Montreal, will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

Students resident in Montreal may share in the bursary fund, on producing certificates from their ministers or clergymen that such aid is absolutely necessary to their continuing in attendance at the school.

In addition to religious instruction of a general Protestant character by the Professors, arrangements will be made for special religious instruction by ministers representing the several denominations with which the students may be connected.

No boarding-house is attached to the institution, but every care will be taken to insure the comfort and good conduct of the students, in private boarding-houses approved by the Principal. Board can be obtained at from $10 to $14 per month.

The Prince of Wales Medal and Prize will be given to the Student taking the highest place in the Model School Class, provided that such Student shall attain to the standard fixed by the Regulations of the Council of Public Instruction for this Medal.

The Earl of Dufferin Medal will be given to the student taking the highest place in the Classical and Mathematical subjects of the Academy class, and passing creditably in the other subjects.

The J. C. Wilson Prize of $40 and a Book, contributed by him as a former Student of the School, will be offered for competition to the candidates for the Elementary Diploma, and will be given for the highest aggregate number of marks,

All the preceding regulations and privileges apply to female as well as to male students.

Persons holding the degree of B. A. or M. A. of any University in the Province of Quebec, may receive the Academy Diploma, on passing an examination in the art of teaching, and in such other subjects necessary to the Academy Diploma, as may not have been included in their University Examinations.

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3. *Course of Study.*

1. ELEMENTARY SCHOOL CLASS STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating those who may be unable to enter at the commencement of the Session, or whose previous education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows :—

FIRST TERM, from September 1st to December 26.

(*Entrance examination as stated above.*)

English.—Grammar and Composition ; so far as to parse syntactically and write correctly a few short descriptive sentences. Text-Books, Bullion's Grammar and Parker's Progressive Lessons ; Reading and Spelling, Etymology, Penmanship, Elocution.

Geography.—So far as to have a good acquaintance with the Map of the world.

History.—Outline of Sacred and Ancient History.—History of Canada. Text-Books, White and Hodgins.

Arithmetic.—Simple and Compound rules. Vulgar Fractions, with explanation and demonstration of rules. Text-Book, Sangster's Arithmetic.

Algebra.—The Elementary rules as in Todhunter's Algebra.

Geometry.—First Book of Euclid.

Art of Teaching.—The Physical, Mental and Moral Constitution of Children.

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Physics.—The Chief Forces of Nature, Properties and States of Bodies, Solids, Liquids and Gases.

French.—Elements of Grammar, easy reading and translation. Text-Books, Student's Companion to the study of French. Darey, Lectures francaises.

Natural History.—Botany as in Gray's Text-Book.

Drawing.—Elements and Simple outlines.

Music.—Vocal Music with Part Songs.

SECOND TERM. January 1st to April 1st.

(*Pupils entering at the commencement of this term, will be expected to pass a satisfactory examination in the subjects of the previous term.*)

English.—Grammar and Composition, so far as to be able to analyse simple and complete sentences, and to write correctly a short essay on a familiar subject.—Elocution continued.

Geography.—So far as a good acquaintance with the physical features and political divisions of the great continents.

History.—England and France. Ancient History.

Arithmetic. Practice, Proportion and Per-centage.

Algebra. Simple Equations.

Geometry. Second Book of Euclid.

Art of Teaching. General Methods of Education.

Physics. Motion. Vibration. Heat and Light.

French. Grammar continued; including Reading, Translation, Oral and Written Exercises.

Natural History, Continued.

Drawing. Landscape, etc., in Pencil.

Music. Elements of Vocal Music, and Part Songs.

THIRD TERM. April 1st, to July 1st.

(*Pupils entering at the commencement of this term, will be expected to pass a satisfactory examination in the subjects of the previous terms.*)

English.-Advanced Lessons, Grammar and Composition, Elocution continued.

Geography and History.—Advanced Lessons, with use of Globes and recapitulation of previous parts of the course.

Arithmetic. As applied to Mensuration; and general Recapitulation.

Book-keeping. First principles.

Algebra. Simple Equations of two and three unknown quantities.

Geometry. Recapitulation and Deductions.

Art of Teaching. School arrangements.

Elementary Chemistry. Elements and Constituents of Soils.

French, Natural History, Drawing and Music. Continued as in the previous term.

Religious Instruction will be given throughout the Session.

2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

[*Students entering this Class, must have passed a satisfactory examination in the subjects of the Elementary School Class. The Class will pursue its studies throughout the Session, without any definite division into terms.*]

English.—Principles of Grammar and Composition, Style. History of the English Language. Lectures on English Literature. Elocution.

Geography. — Mathematical, with Nautical Problems, Detailed course of Political and Physical Geography.

History.—Mediæval and Modern, with special reference to the History of Literature, Science and Art, and Colonization and Commerce.

Education.—Advanced course of Lectures on Educational Subjects.

Mathematics.—Logarithmic, Algebraic and Geometric Arithmetic, Recapitulation of Commercial Arithmetic and Book-keeping. Quadratic Equations. Ratios and Progression. Theorem of Undermined Coefficients, and Binomia Theorems. Third, Fourth and Sixth Books of Euclid. Application to mensuration.

Object Lessons.

Chemistry and Natural Philosophy. — Affinity, Laws of Combination, Principal groups of Salts, Electricity and Electrolysis, Mechanical Physics.

Classics.—Elements of the Latin Language, as in Bryce's 1st Latin Reader.

French.—Student's Companion. Translation from French into English, and fiom English into French ; Darey, Lectures francaises.

Agricultural Chemistry.—Principles, and application to Canadian Agriculture.

Drawing.—Figures from the Flat and from Models. Elements of Perspective.

Music.—Instrumental Music, Part Songs, and Rudiments of Harmony.

Religious Instruction throughout the Session.

3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA.

(*Students entering this Class must have passed a creditable examination in the subjects preparatory to the Course of Study.*)

English Literature.—An Advanced course.

History and Geography.

Logic and Ethics.—As in Abercrombie's Intellectual and Moral Philosophy.

Mathematics. — Trigonometry, Solid Geometry, and Mechanics, Galbraith and Haughton.

Latin.—Sallust, Catiline ; Virgil, Æneid, Book VI. ; Latin Prose Composition, Roman History.

Greek.—New Testament, John's Gospel ; Xenophon, Anabasis B. I ; Grammar and History.

Botany.—As in Gray's Text-Book.

French.—Conversation in French. French Literature. Poitevin's French Grammar, Racine and Moliere.

Elocution.

Drawing.

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EXTRACTS FROM THE REGULATIONS.

Special Regulations for the admission of teachers in training.

Article First,—Any person desirous of being admitted as a teacher in training must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is full sixteen years of age, with the certificate of character and conduct required by the 6th article of the General Rules and regulations, approved by his Excellency the Governor-General in Council, on the 22nd December, 1856, shall examine the candidate.

If upon his examination it is found that the candidate can read and write sufficiently well, knows the Rudiments of Grammar in his mother tongue, Arithmetic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate having thus obtained the certificate of the Principal, shall then, (in the presence of two witnesses, who, with the Principal, shall countersign the same,) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of Education, together with all the certificates and other documents required, and if the whole be found correct, the Superintendent shall cause the name of the candidate to be inscribed in the Register, and notice thereof shall be given to the Principal.

Article Third.—The teachers in training shall state the place of their residence ; and those who cannot reside with their parents, will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-houses having permission to board male teachers in training will be permitted to receive female teachers in training as boarders, and *vice versa*.

Article Fourth.—Every teacher in training, on passing the examination, will be allowed a sum not exceeding $36 to assist in paying his board. (*)

Article Fifth.—Every teacher in training residing at a distance of more than ninety miles from the City of Montreal, shall be entitled to receive an allowance for travelling expenses proportionate to the distance, but not to exceed ten dollars *per annum*.

Article Sixth.—The total amount of allowances paid to teachers in training under the foregoing articles shall not exceed $1333,33 currency, yearly—that being the sum granted for that object ; and when the whole of this amount is appropriated, such teachers in training as may apply for admission shall not be entitled to any portion thereof until vacancies shall occur.

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* Except in the case of teachers in training for the Academy Diploma, who may receive a sum not exceeding $80.

Special Regulations for Government and Discipline.

Article First.—Teachers in training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, or keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled.

Article Second.—There shall be no intercourse between the male and female teachers-in-training while in School, or when going to, or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Article Third.—They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorized by the Principal shall report to him any infraction of the rules with which they may have become acquainted.

Article Sixth.—The Professors shall have the power of excluding from the ectures, for a time, any student who may be inattentive to his studies, or guilty of any minor infraction of the regulations.

Article Seventh.—Teachers in training will be required to state with what religious denomination they are connected; and a list of the Students connected with each denomination shall be furnished to one of the Ministers of such denomination resident in Montreal, with a request that he will meet weekly with that portion of the teachers in training, or otherwise provide for their religious instruction. Every Thursday after four o'clock will be assigned for this purpose.

Article Eighth.—In addition to punctual attendance at weekly religious instruction, each student will be required to attend public worship at his own church, at least every Sunday.

Intending students may obtain all necessary information on application to lhe Principal or either of the Professors.

MODEL SCHOOL OF McGILL NORMAL SCHOOL.

Head Teacher of Boys' School—Francis W. Hicks, M. A.
" " Girls' School—Jane A. Swallow.
" " Primary School—Lucy H. Derick.

These Schools can accommodate about 300 pupils, are supplied with the best furniture and apparatus, and conducted on the most modern methods of teaching. They receive pupils from the age of six and upwards, and give a thorough English Education. Fees; Boys' and Girls' Model Schools, 25c. to 40c. per week; Primary School, 15c.; payable weekly.

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School Examinations of the McGill University.

FOR THE CERTIFICATE OF THE UNIVERSITY AND THE TITLE OF ASSOCIATE IN ARTS.

These Examinations are held in Montreal, commencing May 21st, but local centres may be appointed elsewhere on application to the Principal of the University, accompanied with satisfactory guarantees for the payment of necessary expenses.

The Examinations are open to Boys or Girls, under 18 years of age, from any Canadian School, under the following regulations.

Subjects of Examination.—1877.

1. These are divided into two Classes, (I) *Preliminary*, consisting of those in which every Candidate must pass, and (II) *Optional*, consisting of those in which the Candidate may have a choice.

2. The Preliminary subjects, with their values severally, are :—

English Reading	30 *marks.*
English Dictation	40 do.
English Grammar (as in Morell)	50 do.
Arithmetic (all the ordinary rules)	90 do.
Geography (acquaintance with the maps of each of the four Continents, and of British North America)	50 do.
British History (as in Collier), and Canadian History	50 do.

The Candidates will also be examined in the Gospels, unless objection be made thereto by their parents or guardians, and creditable answering in the same will be mentioned in the Certificate.

Additional marks, not exceeding 20, may be allowed in the Dictation paper, for quality of handwriting.

No candidate can pass unless he shall have obtained at least *one-third* of the total number of marks in each of the above subjects, except Reading and Dictation, in which *two-thirds* will be required.

3. The Optional subjects are divided into three sections as follows :—

(1) Languages.

Latin.

Grammar. Cæsar, B. G. Bk. I. Horace, Odes, Bk. I. Virgil, Æn., Bk. I.	150 marks.

Greek.

Grammar. Homer, Iliad, Bk. I. Xenophon, Anabasis, Bk. I.	150 do

French.

Grammar.
Extracts from Molière, in Darey's French Reader.
Translation from English into French. — 100 do.

German

Grammar.
Adler's Reader, Section II.
Translation from German into English. — 100 marks.

(2) Mathematics, Natural Philosophy, &c.

Geometry.

Euclid, I. II. III. — 150 do.

Algebra.

Elementary rules, Involution. Evolution, Fractions, Simple Equations. — 150 do.

Natural Philosophy.

Mechanics and Hydrostatics. (As in any ordinary School Text-Book.) — 100 do.

Mechanical and Architectural Drawing — 100 do.

(3) English.

The English Language :—

Earl's Philology of the English Tongue, Historic Sketch and chaps. V to VIII.
Trench's Study of Words. — 100 do.

English Literature.

English Literature. Primer by S. A. Brooke.
Scott's Lady of the Lake.
Addison's Sir Roger de Coverley. — 100 do.

Additional Marks, not exceeding 50, may be allowed in the literature paper for quality of Composition.

History,—Freeman's General European History — 100 do.
Geography,—Physical, Political and Commerical — 100 do.

Instead of passing in one or more subjects of the English Section, Candidates may, if they prefer it, pass in one or more of the following subjects :—

(4) Natural Science.

Zoology, (as in Paterson's Zoology for Schools) — 100 do.
Botany, (as in Gray's First Lessons) — 100 do.
Geology, (as in Dana's Text-Book) — 100 do.
Chemistry (as in Miller's Introduction to Inorganic Chemistry) — 100 do.

Every Candidate must pass in at least one, and not more than three subjects in each of the Optional Sections.

No Candidate will be considered as having passed in any of the above Optional Subjects, unless he has obtained *at least one-fourth* of the total number of Marks obtainable in that subject.

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Any Candidate who passes in more than one subject of any section, and who in at least one of those subjects obtains *more than half* the total number of Marks, will be entitled to a Certificate of creditable answering, in that subject.

The total number of Marks gained by every Candidate, including both Preliminary and Optional Subjects, shall be added up, and the Candidates arranged in a printed list, at the close of the Examination, in the order of these totals. No Marks in any subject shall be counted unless the Candidate has gained at least the minimum number of Marks in that subject.

Candidates passing in French or other Modern Language or languages, and not in Latin or Greek, shall receive a Junior certificate. Candidates passing in Latin and Greek, or in Latin or Greek with a Modern Language, shall receive a Senior certificate.

Boys taking Senior certificates, shall be termed Associates in Arts of the University.

Every Candidate shall present a certificate of character, and also a certificate from his parents or guardian that his age on the first day of the examination does not exceed eighteen years.

In the case of those who pass in Latin, Greek, English, Algebra and Geometry, the examination will be received as the Matriculation Examination in the Faculty of Arts.

Candidates who fail, or who may be prevented by illness from completing their examinations, may come up at the next examination without extra fee.

The Examination will be held in the William Molson Hall, on Tuesday May 21, and successive days, except Saturday, in the following order.

1. *Preliminary Subjects.* — (May 21,) English ; Geography ; Gospels ; (22,) Arithmetic ; British and Canadian History.

1. *Optional Subjects.*—(May 23,) Latin ; French ; (27,) Greek ; German ; (28,) Mathematics, &c., ; (29,) English, &c., ; (30,) Natural Science.

Hours of Examination, 9 a. m. and 2 p. m.

The Examination fee ($4) must be paid by candidates, to the Secretary of the University, on entering their names.

SCHOOL EXAMINATIONS, 1877.

Passed in the Examinations for Associate in Arts, in Order of Relative Standing.

ALEXANDER FALCONER—*(High School, Montreal.)* Latin,* Greek,* English Literature,* French,* History,* Geography,* Geometry,* Algebra,* Mensuration, Scripture.*

THOMAS B. MACAULAY.—*(High School, Montreal.)* Latin,* Greek,* English Literature,* History,* Geography,* French,* Geometry,* Algebra,* Mensuration, Scripture.*

ARMAND F. TEEFY.—*(Collegiate Institute, Hamilton.)* Latin,* Greek,* French,* Geometry,* Algebra,* History.* Geography,* English Literature.*

MINA DOUGLAS.—*(Girls' High School, Montreal.)* Latin,* French,* German,* Geometry,* Algebra,* History,* Geography,* English Literature,* Scripture.*

M. STUART FRASER.—(*Collegiate Institute, Hamilton.*) Latin,* Greek,* Geometry,* Algebra,* History,* Geography,* English Literature,* Scripture.*

WILLIAM MARTIN.—(*Collegiate Institute, Hamilton.*) Latin,* Greek,* Geometry,* Algebra,* Mensuration, History, Geography,* English Literature,* Scripture.*

WALTER H. SNOW.—(*Collegiate Institute, Hamilton.*) Latin,* French, German,* Geometry,* Algebra,* History,* Geography,* English Literature.*

LOUISA MCFEE.—(*Girls' High School, Montreal.*) Latin, French,* German,* Geometry, Algebra, History,* Geography,* English Literature,* Scripture.*

MARGARET MILLS.—(*Collegiate Institute, Hamilton.*) Latin,* French,* German,* Geometry,* Algebra,* Geography,* English Literature,* Chemistry.

IDA PAPINEAU.—(*Girls' High School, Montreal.*) Latin, French,* German,* Geometry,* Algebra,* History,* Geography,* English Literature.*

WALTER E. LYMAN.—(*Proprietary School, Montreal.*) Latin,* Greek,* German,* Geometry,* Algebra, History,* Geography,* English Literature,* Scripture.*

HELEN MACKLEN.—(*Collegiate Institute, Hamilton.*) Latin,* French,* German,* Geometry,* Algebra,* Geography,* English Literature.*

JANE DARLING.—(*Girls' High School Montreal.*) Latin, French,* German,* Geometry,* Algebra, History,* Geography,* Scripture.*

GEORGE GRAHAM.—(*Collegiate Institute, Hamilton.*) Latin,* Greek,* Geometry,* Algebra,* History, English Literature, Scripture.

MURRAY A. BIGGAR.—*(Collegiate Institute, Hamilton.)* Latin,* French,* Geometry,* Algebra,* History,* Geography,* English Literature,* Scripture.

JESSIE ROSS.—(*Girls' High School, Montreal.*) Latin, French,* German,* Geometry,* Algebra,* History,* Geography,* English Literature,* Scripture.*

EVA DAWSON.—(*Girls' High School, Montreal.*) Latin, French, Geometry,* Algebra, History,* Geography,* English Literature,* Scripture.*

ALICE CUMMING.—(*Collegiate Institute, Hamilton.*) Latin,* French,* Geometry,* Algebra,* Geography,* English Literature,* Scripture.*

KENNETH R. MACPHERSON.—(*High School, Montreal.*) Latin, Greek, English Literature,* History, Geography,* French, Geometry, Algebra,* Scripture.

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WALTER H. LANCEY.—(*High School, Montreal.*) Latin, French, Algebra,* Mensuration, Geometry,* Geography,* History, English Literature,* Scripture.

ROBERT A. WALLACE.—(*Collegiate Institute, Hamilton.*) Latin, Geometry,* Algebra,* History,* Geography,* English Literature,* Chemistry.*

ALEXANDER MCGIBBON.—(*High School, Montreal.*) Latin, Greek, English Literature,* History, Geography, French, Geometry,* Algebra,* Scripture.

MARIETTA JAMES.—(*Collegiate Institute, Hamilton.*) Latin,* French,* Geometry,* Algebra,* Geography, English Literature.*

FRANK WEIR.—(*High School, Montreal.*) Latin,* English Literature,* History, Geography,* French, Geometry, Algebra, Scripture.*

NATHANIEL D. DREW.—(*High School, Montreal.*) Latin, English Literature,* Geography, French, Geometry,* Algebra, Scripture.

Passed in the Examinations for Junior Certificate.

ANNIE CUSACK.—(*Collegiate Institute, Hamilton.*) French, Geometry,* Algebra,* Geography,* English Literature,* Botany, Chemistry.

LIZZIE COX.—(*Collegiate Institute, Hamilton.*) French,* Geometry,* Algebra,* Geography,* English Literature,* Chemistry, Botany.*

ELLA GARDINER.—(*Collegiate Institute, Hamilton.*) French,* German,* Geometry,* Algebra,* Geography,* English Literature.*

ELIZABETH MONK.—(*Girls' High School, Montreal.*) French, German,* Algebra, History,* Geography,* English Literature,* Scripture.*

LIZZIE LOGAN.—(*Collegiate Institute, Hamilton.*) French, Geometry, Algebra,* Geography,* English Literature,* Botany.

ALEXANDER W. RICHARDSON.—(*High School, Montreal.*) English Literature, History, Geography, French, Geometry, Algebra, Mensuration.

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* Creditable answering.

School Certificates of the University.

1. *Examinations for Senior certificates, and for Associates in Arts.*

1865

Montgomery Jones
John Ferguson
Charles Cushing
Robert H. Conroy
Samuel Stevenson
Wallace Clarke
Frederick W. Evans
Robert W. Forester
Edward B. Greenshields
Montgomerie Lewis
George Joseph Bull
Albert Murray
Daniel McLachlin

1866

Sidney Arthur Fisher
Charles E. Proteous
Will. W. Walkem
Chas. G. Stewart
Geoffrey W. Porteous
Florence David
Hew D. Whitney
George W. Torrance
Robt. M. Esdaile

1867

Charles H. Ferry
James Rodger
Geoffrey W. Porteous
Thomas C. Thomson
Francis J. Shepherd
Gerald Lloyd

1868

John Fraser Torrance
Will. Osborne M. Cross
Henry G. W. Badgley
John B. Abbott
John Gray Grant
Thomas C. Hempsted

1869

Arthur F. Ritchie
Simon J. Tunstall
Charles R. Jones
O'Hara Baynes
Aaron D. M. DeSola
Charles Jas Fleet
John Thos. Caldwell
James M. Mitchell
John Kay
James Green

1870

William Bell Dawson
Archibald D. Taylor
Hiram B. Stephens
Henry W. Thomas
Samuel Greenshields
Sheringham A. Shepherd
William McEachran
David S. Robertson

1875

William D. Lighthall
W. A. Farwell
Robert T. B. Howard
Charles A. Molson

1876

J. Herbert Darcy
Paul Theodore Lafleur
Edwin Hudson Bisset
Andrew G. Ross
James R. Foster
Frederick Mindon Cole
William Dawson McGregor
John Ewart
J. Gordon Gibson
Wilfred T. Skaife
Charles J. Walker

1877

Alexander Falconer
Thomas B. Macaulay
Armand F. Teefy
Mina Douglas
M. Stuart Fraser
William Martin
Walter H. Snow
Louisa M. Fee
Margaret A. Mills
Ida Papineau
Walter E. Lyman
Helen Macklen
Jane Darling
George Graham
Murray A. Biggar
Jessie Ross
Eva Dawson
Alice Cumming
Kenneth R. Macpherson

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Walter H. Lancey
Robert A. Wallace
Alexander McGibbon
Marietta Jones
Frank Weir
Nathaniel D. Drew

2. *Examination for Junior Certificates.*

1875

Charles F. Dawson
William C. Norris
William S. Kerry
Frank D. Adams

1876

William R. Robertson

1877

Annie Cusack
Lizzie Cox
Ella Gardiner
Elizabeth Monk
Jessie Logan
Alexander W. Richardson

Examination Papers

OF THE

McGILL UNIVERSITY,

MONTREAL.



SESSION OF 1876-77.

Montreal:
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1877.

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EXHIBITIONS AND SCHOLARSHIPS, 1876.

FIRST YEAR EXHIBITIONS, 1876.

GREEK.

WEDNESDAY, SEPTEMBER 15TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—Homer, Iliad, Book I.

(A) Οἰνοβαρὲς, κυνὸς ὄμματ' ἔχων, κραδίην δ' ἐλάφοιοι,
οὔτε ποτ' ἐς πόλεμον ἅμα λαῷ θωρηχθῆναι
οὔτε λόχονδ' ἰέναι σὺν ἀριστήεσσιν Ἀχαιῶν
τέτληκας θυμῷ· τὸ δέ τοι κὴρ εἴδεται εἶναι.
ἦ πολὺ λώϊόν ἐστι κατὰ στρατὸν εὐρὺν Ἀχαιῶν
δῶρ' ἀποαιρεῖσθαι, ὅστις σέθεν ἀντίον εἴπῃ.
δημοβόρος βασιλεὺς, ἐπεὶ οὐτιδανοῖσιν ἀνάσσεις·
ἦ γὰρ ἂν, Ἀτρεΐδη, νῦν ὕστατα λωβήσαιο.
ἀλλ' ἔκ τοι ἐρέω καὶ ἐπὶ μέγαν ὅρκον ὀμοῦμαι·
ναὶ μὰ τόδε σκῆπτρον, τὸ μὲν οὔποτε φύλλα καὶ ὄζους
φύσει, ἐπειδὴ πρῶτα τομὴν ἐν ὄρεσσι λέλοιπεν,
οὐδ' ἀναθηλήσει· περὶ γὰρ ῥά ἑ χαλκὸς ἔλεψεν
φύλλα τε καὶ φλοιόν· νῦν αὖτέ μιν υἷες Ἀχαιῶν
ἐν παλάμῃς φορέουσι δικασπόλοι, οἵτε θέμιστας
πρὸς Διὸς εἰρύαται· ὃ δέ τοι μέγας ἔσσεται ὅρκος·
ἦ ποτ' Ἀχιλλῆος ποθὴ ἵξεται υἷας Ἀχαιῶν
σύμπαντας· τότε δ' οὔτι δυνήσεαι ἀχνύμενός περ
χραισμεῖν, εὖτ' ἂν πολλοὶ ὑφ' Ἕκτορος ἀνδροφόνοιο
θνήσκοντες πίπτωσι· σὺ δ' ἐνδοθι θυμὸν ἀμύξεις
χωόμενος, ὅτ' ἄριστον Ἀχαιῶν οὐδὲν ἔτισας.

2. Write down and parse the Epic forms of *nouns*, *pronouns* and *verbs* that occur in ext. (A) and give their equivalents in the dialect of Xenophon.

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3. Write down the scheme of the Homeric Poems. Scan (carefully marking the the quantities of the several feet) the last four verses of ext. (A) and account for the quantity of the ultimate in the words *δυνήσεαι* and *πολλοί*, severally.

4. Translate:—Xenophon, Anabasis, Book I.

(B) Πρὸς ταῦτα Κῦρος εἶπε τοῖς παροῦσιν, Ὁ μὲν ἀνὴρ τοιαῦτα μὲν πεποίηκε, τοιαῦτα δὲ λέγει· ὑμῶν δὲ σὺ πρῶτος, ὦ Κλέαρχε, ἀπόφηναι γνώμην ὅ,τι σοι δοκεῖ. Κλέαρχος δὲ εἶπε τάδε· Συμβουλεύω ἐγὼ τὸν ἄνδρα τοῦτον ἐκποδὼν ποιεῖσθαι ὡς τάχιστα, ὡς μηκέτι δέῃ τοῦτον φυλάττεσθαι, ἀλλὰ σχολὴ ἡμῖν τὸ κατὰ τοῦτον εἶναι τοὺς ἐθελοντὰς φίλους τούτους εὖ ποιεῖν. Ταύτῃ δὲ τῇ γνώμῃ ἔφη καὶ τοὺς ἄλλους προσθέσθαι. μετὰ ταῦτα κελεύοντος Κύρου ἐλάβοντο τῆς ζώνης τὸν Ὀρόντην ἐπὶ θανάτῳ ἅπαντες ἀναστάντες καὶ οἱ συγγενεῖς. εἶτα δὲ ἐξῆγον αὐτὸν οἷς προσετάχθη. ἐπεὶ δὲ εἶδον αὐτὸν οἷπερ προσθεν προσεκύνουν, καὶ τότε προσεκύνησαν, καίπερ εἰδότες ὅτι ἐπὶ θανάτῳ ἄγοιτο. Ἐπεὶ δὲ εἰς τὴν Ἀρταπάτου σκηνὴν εἰσήχθη τοῦ πιστοτάτου τῶν Κύρου σκηπτούχων, μετὰ ταῦτα οὔτε ζῶντα Ὀρόντην οὔτε τεθνηκότα οὐδεὶς εἶδε πώποτε, οὐδὲ ὅπως ἀπέθανεν οὐδεὶς εἰδὼς ἔλεγεν· εἴκαζον δὲ ἄλλοι ἄλλως· τάφος δὲ οὐδεὶς πώποτε αὐτοῦ ἐφάνη.

5. Explain carefully the following constructions:—(*a*) *τὸ κατὰ τοῦτον εἶναι*. (*b*) *ἐλάβοντο τῆς ζώνης τὸν Ὀρόντην*. (*c*) *κελεύοντος Κύρου*. *τῶν Κύρου σκηπτούχων*:—What uses of the Genitive? (*d*) Distinguish between the meaning of *ἐπὶ θανάτῳ* and of *ἐπὶ θάνατον*. (*e*) Illustrate from ext. (B) the distinction between the Imperfect and Aorist Tenses.

6. Parse the following verbs:—*παροῦσιν, ἀπόφηναι, εἰσηνέχθη, μεῖναι, ἐπύθετο, κατακεκόψεσθαι, ἐπῆει, ἐδύνω, ἐλῶντα, σύνθοιτο*.

7. Give the derivation and explain the meaning of the following words:—*εὐώνυμον, πελταστάς, σπονδαί, ὁμοτράπεζοι, ποδήρεσι, σταθμός, ὀργυιαί, ζηλωτόν*.

8. Translate:—Lucian, Charon.

(C) ΕΡΜ. Τοῦτο τὸ πρᾶγμα πληγῶν αἴτιον καταστήσεταί μοι· ὁρῶ γοῦν ἤδη τὸν μισθὸν τῆς περιηγήσεως οὐκ ἀκόνδυλον παντάπασιν ἡμῖν ἐσόμενον. ὑπουργητέον δὲ ὅμως· τί γὰρ ἂν καὶ πάθοι τις, ὁπότε φίλος τις ὢν βιάζοιτο; πάντα μὲν οὖν σε ἰδεῖν καθ' ἕκαστον ἀκριβῶς ἀμήχανόν ἐστιν, ὦ πορθμεῦ· πολλῶν γὰρ ἂν ἐτῶν ἡ διατριβὴ γένοιτο. εἶτα ἐμὲ μὲν κηρύττεσθαι δεήσει καθάπερ ἀποδράντα ὑπὸ τοῦ Διός, σὲ δὲ καὶ αὐτὸν κωλύσει ἐνεργεῖν τὰ τοῦ Θανάτου ἔργα καὶ τὴν Πλούτωτος ἀρχὴν ζημιοῦν μὴ νεκραγωγοῦντα πολλοῦ τοῦ χρόνου· κἂτα ὁ τελώνης Αἰακὸς ἀγανακτήσει μηδ' ὀβολὸν ἐμπολῶν. ὡς δὲ τὰ κεφάλαια τῶν γιγνομένων ἴδοις, τοῦτο ἤδη σκεπτέον.

ΧΑΡ. Αὐτὸς, ὦ Ἑρμῆ, ἐπινόει τὸ βέλτιστον· ἐγὼ δὲ οὐδὲν οἶδα τῶν ὑπὲρ γῆς ξένος ὤν.

ΕΡΜ. Τὸ μὲν ὅλον, ὦ Χάρων, ὑψηλοῦ τινος ἡμῖν δεῖ χωρίου, ὡς ἀπ' ἐκείνου πάντα κατίδοις· σοὶ δὲ εἰ μὲν ἐς τὸν οὐρανὸν ἀνελθεῖν δυνατὸν ἦν, οὐκ ἂν ἐκάμνομεν· ἐκ περιωπῆς γὰρ ἂν ἀκριβῶς ἅπαντα καθεώρας. ἐπεὶ δὲ οὐ θέμις εἰδώλοις ἀεὶ ξυνόντα ἐπιβατεύειν τῶν βασιλείων τοῦ Διός, ὥρα ἡμῖν ὑψηλόν τι ὄρος περισκοπεῖν.

9. (*a*) Write a short account of the mythological personages referred to in ext. (C). (*b*) When and where was Lucian born? (*c*) Write a brief outline of the *Charon*.

10. (*a*) Decline:—*θύρα, γλῶσσα, ὄρνις, ἀνήρ, μείζων.* (*b*) Compare:—*κοῦφος, ἐχθρὸς, ταχύς, ἄξιος, καλός.* (*c*) Translate into Greek:—(1) The father came to see his son. (2) The king said that he would give much gold to his soldiers if they conquered the enemy. (3) The good soldiers have come to fight and not to run away. (4) The ather and his daughter are wise and good.

LATIN.

FRIDAY, SEPTEMBER 15th:—AFTERNOON, 2 TO 5.

Examiner, ...REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Cicero, Pro Lege Manilia.

Quo tandem igitur animo esse existimatis aut eos, qui vectigalia nobis pensitant, aut eos, qui exercent atque exigunt, quum duo reges cum maximis copiis propter adsint? quum una excursio equitatus perbrevi tempore totius anni vectigal auferre possit? quum publicani familias maximas, quas in saltibus habent, quas in agris, quas in portubus atque custodiis, magno periculo se habere arbitrentur? Putatisne vos illis rebus frui posse, nisi eos, qui vobis fructui sunt, conservaritis non solum, ut ante dixi, calamitate, sed etiam calamitatis formidine liberatos? Ac ne illud quidem vobis negligendum est, quod mihi ego extremum proposueram, quum essem de belli genere dicturus, quod ad multorum bona civium Romanorum pertinet, quorum vobis pro vestra sapientia, Quirites, habenda est ratio diligenter. Nam et publicani, homines honestissimi atque ornatissimi, suas rationes et copias in illam provinciam contulerunt, quorum ipsorum per se res et fortunae vobis curae esse debent. Etenim si vectigalia nervos esse rei publicae semper duximus, eum certe ordinem, qui exercet illa, firmamentum caeterorum ordinum recte esse dicemus.

2. (*a*) Derive, and explain the force of *tandem*. (*b*) Explain the formation of *pensitant*. (*c*) *Pro vestra sapientia*;—give other equivalent forms of

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expressing this. (*d*) Explain the meaning of *vectigalia*, *publicani*, *familias*, *scriptura*. (*e*) With what object and at what time was this oration delivered? By what name is it designated by the ancient authorities?

3. Translate :—(B) Livy, Book V.

Tristem hiemem sive ex intemperie caeli raptim mutatione in contrarium facta, sive alia qua de causa gravis pestilensque omnibus animalibus aestas excepit. cuius insanabili pernicie quando nec causa nec finis inveniebatur, libri Sibyllini ex senatus consulto aditi sunt. duumviri sacris faciundis lectisternio tunc primum in urbe Romana facto per dies octo Apollinem Latonamque et Dianam, Herculem, Mercurium atque Neptunum tribus quam amplissume tum apparari poterat stratis lectis placavere. privatim quoque id sacrum celebratum est. tota urbe patentibus ianuis promiscoque usu rerum omnium in propatulo posito notos ignotosque passim advenas in hospitium ductos ferunt, et cum inimicis quoque benigne ac comiter sermones habitos, iurgiis ac litibus temperatum ; vinctis quoque dempta in eos dies vincula, religioni deinde fuisse, quibus eam opem dei tulissent, vinciri. —Interim ad Veios terror multiplex fuit tribus in unum bellis conlatis. namque eodem quo antea modo circa munimenta, cum repente Capenates Faliscique subsidio venissent, adversus tres exercitus ancipiti proelio pugnatum est. ante omnia adiuvit memoria damnationis Sergii ac Verginii. itaque e maioribus castris, unde antea cessatum fuerat, brevi spatio circumductae copiae Capenates in vallum Romanum versos ab tergo adgrediuntur.

4. Carefully point out the grammatical construction of :—(*a*) Insanabili pernicie. (*b*) Sacris faciundis. (*c*) Jurgiis ac litibus. (*d*) Religioni. (*e*) Venissent. (*f*) Account for the position of the words *Tristem hiemem*.

5. (*a*) *Libri Sibyllini* ;—Explain, and give the legend. (*b*) Give the Greek names of the divinities mentioned in Ext. (B). (*c*) *Capenates*, *Falisci*; —From what proper nouns are these formed and how?

6. Translate :—(C) Horace, Odes, Book I.

Sed omnes una manet nox
Et calcanda semel via leti :
Dant alios Furiae torvo spectacula Marti;
Exitio est avidum mare nautis ;
Mixta senum ac juvenum densentur funera, nullum
Saeva caput Proserpina fugit.
Me quoque devexi rapidus comes Orionis
Illyricis Notus obruit undis.
At tu, nauta, vagae ne parce malignus arenae
Ossibus et capiti inhumato
Particulam dare : sic quodcunque minabitur Eurus
Fluctibus Hesperiis Venusinae

Plectantur silvae te sospite, multaque merces
Unde potest tibi defluat aequo
Ab Jove Neptunoque sacri custode Tarenti.
Negligis immeritis nocituram
Postmodo te natis fraudem committere? Fors et
Debita jura vicesque superbae
Te maneant ipsum: precibus non linquar inultis,
Teque piacula nulla resolvent.
Quamquam festinas non est mora longa; licebit
Injecto ter pulvere curras.

7. (*a*) Write short explanatory notes on such words or phrases in ext. (C) as you may deem to need them. (*b*) Name the metre of the same ext. and scan the last four verses. (*c*) A short account of Horace, naming his most celebrated contemporaries.

8. Parse the following words:—Saltibus, contulerunt, aditi sunt, stratis, placavere, dempta, densentur, devexi, assuestis, intactae.

9. (*a*) Write down the principal parts of:—cupio, cumbo, vincio, cædo. (*b*) Inflect the Pres. Subj. Pass. of juvo; the Perf. Subj. Act of cedo; and the Imp. Subj. of volo; and mark the quantity of the *penultimate* of each form.

10. Translate into Latin:—

1. If I shall hear that both you and your friends are miserable it will grieve me much. 2. Cicero, the consul, overcame Catiline and his companions, and on that account was greeted as father of his country. 3. Capua, the chief city of Campania, was taken by Hannibal, general of the Carthaginians, in the second Punic War. 4. Homer is rightly called the king of poets, and Demosthenes the prince of orators. 5. The envoys came to the general and informed him of their business, but he concealed from them his own opinion. 6. He left his helmet in his tent, and on entering the town he was struck on the head with a large stone and slain. 7. He was accustomed to watch over the interests of the good, but the bad he held in no esteem. 8. When news had come of the defeat of the enemy the consul returned to Rome, and pitched his camp three miles from the city.

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EUCLID.

SATURDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Inscribe a regular quindecagon in a circle.

2. If a right line be bisected and also cut unequally, the rectangle under the unequal parts, together with the square of the line between the points of section is equal to the square of half the line.

α. Find the segments of a line 24 inches long, which is cut internally so that the rectangle under the segments shall be 100 square inches.

3. Angles in the same segment of a circle are equal.

L. If two equal angles stand on the same arc, and the vertex of one of them be in the circumference of a circle, the vertex of the other shall be in the same circumference.

4. The difference between two sides of a triangle is less than the third side.

5. Inscribe in a given circle a triangle equiangular to a given triangle.

6. In a circle, the angle in a semicircle is a right angle, the angle in a segment greater than a semicircle is less than a right angle, and the angle in a segment less than a semicircle is greater than a right angle.

7. The sum of the squares of the sides of a quadrilateral is equal to the sum of the squares of its diagonals and four times the square of the line joining their middle points.

8. The sum of the squares of any two lines is equal to twice the rectangle contained by the lines, together with the square of the difference of the lines.

ALGEBRA AND ARITHMETIC.

SATURDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiners..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Solve the equations

$$\sqrt{a+x} + \sqrt{a-x} = \frac{12a}{5\sqrt{a+x}};$$

$$\frac{x}{a} + \frac{y}{b} = 1 - \frac{x}{c}; \quad \frac{y}{a} + \frac{x}{b} = 1 + \frac{y}{c}.$$

2. Reduce to its simplest form the expression :—

$$7\sqrt[3]{54} + 3\sqrt[3]{16} + \sqrt[3]{2} - 5\sqrt[3]{128}.$$

3. Find the greatest common measure of

$$2x^3 + x^2 - 8x + 5 \text{ and } 7x^2 - 12x + 5.$$

4. Simplify $\dfrac{\dfrac{m^2+n^2}{n} - m}{\dfrac{1}{n} - \dfrac{1}{m}} \times \dfrac{m^2 - n^2}{m^3 + n^3}$

5. A number consists of two digits of which the left is twice the right, and the sum of the digits is one seventh of the number itself. Find the number.

6. Solve the following :—

$$\frac{x}{a} + \frac{y}{b} = +1, \quad \frac{x}{a} + \frac{z}{c} = 2, \quad \frac{y}{b} + \frac{z}{c} = 3:$$

$$\frac{1}{x} + \frac{1}{y} = 2, \quad x + y = 2.$$

7. Find the sum of n terms of the series 1, 3, 5, 7, &c.

(*a.*) Showthat the reciprocals of the first four terms and also of any consecutive four terms are in harmonical proportion.

8. A farm is to be paid for by yearly payments of $75 each for 16 years, the first is to be made now. What sum would pay for it in full now, interest being at 4 per cent?

9. If a person gain $8\frac{1}{3}$ per cent. by selling apples at the rate of 8 for $6\frac{1}{2}$d., how much does he gain per cent. by selling them at the rate of 3 for $2\frac{1}{2}$d.

10. Find the difference between 17·428571 square feet and 100·8 square inches.

11. Find the value of $\dfrac{5\frac{5}{8} \div \frac{3}{5}}{1\frac{1}{5} \text{ of } \frac{5}{9} \div 10\frac{1}{3}} \times \frac{3}{5}$ of $\dfrac{1\frac{1}{2} \text{ of } 4\frac{1}{9}}{13\frac{7}{8} \text{ of } 5\frac{1}{3}}$

12. One pound Troy of standard silver is coined into 66 shillings. Calculate the weight avordupois of £145 17s. 6d. in silver.

13. Extract the square root of ·002.

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ENGLISH GRAMMAR.

FRIDAY, SEPTEMBER 15th:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Which are the grammatical forms of the sentence?

2. By what marks is the Noun defined?

3. How are Collective Nouns distinguished from Class Nouns, and Material Nouns from Collective?

4. Which are the Demonstrative Pronouns and the Indefinite?

5. Explain the different significations of the Relative "who."

6. What reasons are given by Bain for the use of "that" as the restrictive or defining Relative?

7. Which are the principal Adverbial Relatives?

8. How are Adverbs classified? Give examples of each class.

9. How are the Subordinating Conjunctions divided?

10. State the rule for the use of the Subjunctive Mood. What different forms of supposition do the following express, "if the man be here? If the man is here? If the man were here?

11. Explain the meaning of the following tenses,—the Present Indefinite, the Present Imperfect, the Past Indefinite, the Perfect.

12. When two or more Pronouns of different persons and of the singular number are connected by the Alternative Conjunctions, what rules are to be observed for determining the number of the Verb?

13. Analyse grammatically the following sentences,—"It is vain to pretend ignorance of the fact." "We saw the place where the standard was raised." "The house fell and great was the fall thereof."

14. Give a historical account of the principal sources of the English Vocabulary.

15. Enumerate the principal Compound Prepositions.

SECOND YEAR EXHIBITIONS.

GREEK.

FRIDAY. SEPTEMBER 15TH:—MORNING, 9 TO 12.

Examiner ..... REV. GEORGE CORNISH, LL.D.

1. Translate:—Homer, Iliad, Book VI.

(A)

Ἦ ῥά νύ μοι ξεῖνος πατρώϊός ἐσσι παλαιός·
Οἰνεὺς γάρ ποτε δῖος ἀμύμονα Βελλεροφόντην
ξείνισ' ἐνὶ μεγάροισιν ἐείκοσιν ἤματ' ἐρύξας·
οἱ δὲ καὶ ἀλλήλοισι πόρον ξεινήϊα καλά·
Οἰνεὺς μὲν ζωστῆρα δίδου φοίνικι φαεινὸν,
Βελλεροφόντης δὲ χρύσεον δέπας ἀμφικύπελλον,
καί μιν ἐγὼ κατέλειπον ἰὼν ἐν δώμασ' ἐμοῖσιν.
Τυδέα δ' οὐ μέμνημαι, ἐπεὶ μ' ἔτι τυτθὸν ἐόντα
κάλλιφ', ὅτ' ἐν Θήβῃσιν ἀπώλετο λαὸς Ἀχαιῶν.
τῷ νῦν σοὶ μὲν ἐγὼ ξεῖνος φίλος Ἀργεϊ μέσσῳ
εἰμὶ, σῦ δ' ἐν Λυκίῃ ὅτε κεν τῶν ὁῆμον ἵκωαι.
ἔγχεα δ' ἀλλήλων ἀλεώμεθα καὶ δι' ὁμίλου·
πολλοὶ μὲν γὰρ ἐμοὶ Τρῶες κλειτοί τ' ἐπίκουροι,
κτείνειν ὃν κε θεός γε πόρῃ καὶ ποσσὶ κιχείω,
πολλοὶ δ' αὖ σοὶ Ἀχαιοὶ, ἐναιρέμεν ὃν κε δύνηαι.
τεύχεα δ' ἀλλήλοις ἐπαμείψομεν, ὄφρα καὶ οἵδε
γνῶσιν ὅτι ξεῖνοι πατρώϊοι εὐχόμεθ' εἶναι.

2. (*a*) Give an account of the ancient custom referred to in this ext. Was it observed in the Historic period of Greece? (*b*) Write explanatory notes on:—(1) *ζωστῆρα φοίνικι φαεινόν.* (2) *δέπας ἀμφικύπελλον.* (3) *Σκαιὰς πύλας.* (4) *Ἀθηναίης γλαυκώπιδος.* (5) *κρητῆρ-ἐλεύθερον.* (*c*) Explain the meaning and give the derivation of the following:—*ἐναίσιμος, ἠλέκτωρ, ἀκοστήσας, χαλκός, εἰλιπόδεσσι, ἀμμορόν, ἄλοχος, ὀλολυγή.*

3. Translate:—Homer, Odyssey, Book IX.

(B)

Ἔνθα δὲ πῦρ κήαντες ἐθύσαμεν ἠδὲ καὶ αὐτοὶ
τυρῶν αἰνύμενοι φάγομεν, μένομέν τέ μιν ἔνδον
ἥμενοι, εἷος ἐπῆλθε νέμων· φέρε δ' ὄβριμον ἄχθος
ὕλης ἀζαλέης, ἵνα οἱ ποτιδόρπιον εἴη.
ἔντοσθεν δ' ἄντροιο βαλὼν ὀρυμαγδὸν ἔθηκεν·
ἡμεῖς δὲ δείσαντες ἀπεσσύμεθ' ἐς μυχὸν ἄντρου.
αὐτὰρ ὅγ' εἰς εὐρὺ σπέος ἤλασε πίονα μῆλα,
πάντα μάλ' ὅσσ' ἤμελγε, τὰ δ' ἄρσενα λεῖπε θύρηφιν,

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ἀρνειούς τε τράγους τε, βαθείης ἔκτοθεν αὐλῆς.
αὐτὰρ ἔπειτ' ἐπέθηκε θυρεὸν μέγαν ὑψόσ' ἀείρας,
ὄβριμον· οὐκ ἂν τόνγε δύω καὶ εἴκοσ' ἅμαξαι
ἐσθλαὶ τετράκυκλοι ἀπ' οὐδεος ὀχλίσσειαν·
τόσσην ἠλίβατον πέτρην ἐπέθηκε θύρῃσιν.
ἐζόμενος δ' ἤμελγεν ὄϊς καὶ μηκάδας αἶγας,
πάντα κατὰ μοῖραν, καὶ ὑπ' ἔμβρυον ἧκεν ἑκάστῃ.

4. Parse the following:—ἐγχείῃ, ἠνώγεα, σπέσσι, μίγεν, κατέδυ, θύρηφιν, ὄϊς, πιέ, κλῦθι, ἵνα. State briefly what you know of the leading theories touching the origin of the Homeric Poems.

5. Translate:—Xenophon, Hellenics, Book I.

(C) αἱ δὲ τῶν Λακεδαιμονίων ἀντιτεταγμέναι ἦσαν ἅπασαι ἐπὶ μιᾶς ὡς πρὸς διέκπλουν καὶ περίπλουν παρεσκευασμέναι, διὰ τὸ βέλτιον πλεῖν. εἶχε δὲ τὸ δεξιὸν κέρας Καλλικρατίδας. Ἕρμων δὲ Μεγαρεὺς ὁ τῷ Καλλικρατίδᾳ κυβερνῶν εἶπε πρὸς αὐτὸν ὅτι εἴη καλῶς ἔχον ἀποπλεῦσαι· αἱ γὰρ τριήρεις τῶν Ἀθηναίων πολλῷ πλείονες ἦσαν. Καλλικρατίδας δὲ εἶπεν ὅτι ἡ Σπάρτη οὐδὲν μὴ κάκιον οἰκεῖται αὐτοῦ ἀποθανόντος, φεύγειν δὲ αἰσχρὸν ἔφη εἶναι. μετὰ δὲ ταῦτα ἐναυμάχησαν χρόνον πολύν, πρῶτον μὲν ἀθρόαι, ἔπειτα δὲ διεσκεδασμέναι ὑπεὶ δὲ Καλλικρατίδας τε ἐμβαλούσης τῆς νεὼς ἀποπεσὼν εἰς τὴν θάλατταν ἠφανίσθη Πρωτόμαχός τε καὶ οἱ μετ' αὐτοῦ τῷ δεξιῷ τὸ εὐώνυμον ἐνίκησαν, ἐντεῦθεν φυγὴ τῶν Πελοποννησίων ἐγένετο εἰς Χίον, πλείστων δὲ καὶ εἰς Φώκαιαν· οἱ δὲ Ἀθηναῖοι πάλιν εἰς τὰς Ἀργινούσας κατέπλευσαν. ἀπώλοντο ἐμ τῶν μὲν Ἀθηναίων νῆες πέντε καῖ εἴκοσιν αὐτοῖς ἀνδράσιν ἐκτὸς ὀλίγων τῶν πρὸς τὴν γῆν προσενεχθέντων, τῶν δὲ Πέλοποννησίων Λακωνικαὶ μὲν ἐννέα, τῶν πασῶν οὐσῶν δέκα, τῶν δ' ἄλλων συμμάχων πλείους ἢ ἑξήκοντα.

6. (*a*) Give the name and date of the battle here described. By what notorious event was it followed at Athens. (*b*) Write short explanatory notes on the following expressions or constructions:—(1) ἐπὶ μιᾶς. (2) ὡς πρὸς διέκπλουν καὶ περίπλουν. (3) διὰ τὸ βέλτιον πλεῖν. (4) εἶπεν ὅτι ἡ * * * οἰκεῖται αὐτοῦ ἀποθανόντος. (5) ἀνήχθη εὐθὺς ἐπὶ Σάμου. (6) ἀνήχθη εὐθὺ Γυθείου. (7) καὶ τοῦ οἴκαδε κατάπλου ὅπως ἡ πόλις πρὸς αὐτὸν ἐχει. (Explain carefully the use of ἐπί, and also of the Genitives, and distinguish between εὐθὺς and εὐθύ.)

7. Translate:—Arrian, Anabasis, Book III.

(D) Λύτὸς δὲ ἐπὶ Σούσων ἐστέλλετο· καὶ ἐντυγχάνει αὐτῷ κατὰ τὴν ὁδὸν ὅ τε παῖς τοῦ Σουσίων σατράπου καὶ παρὰ Φιλοξένου ἐπιστολεύς. Φιλόξενον γὰρ εὐθὺς ἐκ τῆς μάχης ἐπὶ Σούσων ἐστάλκει Ἀλέξανδρος. τῇ δὲ ἐπιστολῇ τῇ παρὰ Φιλοξένου ἐνεγέγραπτο ὅτι τήν τε πόλιν οἱ Σούσιο παραδεδώκασιν καὶ τὰ χρήματα πάντα σῳ̈ά ἐστιν Ἀλεξάνδρῳ. ἀφίκετο δὲ ἐς Σοῦσα Ἀλέξανδρος ἐκ

Βαβυλῶνος ἐν ἡμέραις εἴκοσι· καὶ παρελθὼν εἰς τὴν πόλιν τά τε χρήματα παρέλαβεν, ὄντα ἀργυρίου τάλαντα ἐς πεντακισμύρια, καὶ τὴν ἄλλην κατασκευὴν τὴν βασιλικήν. πολλὰ δὲ καὶ ἄλλα κατελήφθη αὐτοῦ, ὅσα Ξέρξης ἀπὸ τῆς Ἑλλάδος ἄγων ἦλθε, τά τε ἄλλα καὶ Ἁρμοδίου καὶ Ἀριστογείτονος χαλκαῖ εἰκόνες. καὶ ταύτας Ἀθηναίοις ὀπίσω πέμπει Ἀλεξανδρος, καὶ νῦν κεῖνται Ἀθήνησιν ἐν Κεραμεικῷ· αἱ εἰκόνες, ἢ ἀνιμεν ἐς πόλιν, καταντικρὺ μάλιστα τοῦ Μητρῴου, οὐ μακρὰν τῶν Εὐδανέμων τοῦ βωμοῦ· ὅστις δὲ μεμύηται ταῖν θεαῖν ἐν Ἐλευσῖνι, οἶδε τὸν Εὐδανέμου βωμὸν ἐπὶ τοῦ δαπέδου ὄντα.

8. Explain briefly the historical and topographical references of ext. (D).

9. Explain the following constructions:—(*a*) ἐγγὺς ἦν τοῦ ἐξαλλάξειεν τὸν χώρον. (*b*) οὐχ ὑπελείποντο Ἀλεξάνδρῳ τοῦ ἔργου. (*c*) συμπάντων προτεταγμένοι ἦσαν οἱ ἱππεῖς. (*d*) καὶ αὐτοὶ τῆς χώρας ἔμπειροι.

10. (*a*) Classify the letters of the Greek alphabet. (*b*) What is meant by *euphony of consonants?* Correct the spelling of the following, where wrong, according to Attic usage:—*ὀδμή, ἰσθι, γράφδην, πλέκδην, ἐλέχθην, πέπατμαι, σεβνός, βήχς.* (*c*) Accentuate the following words with their proper accents, respectively, on the first syllable of each, and point out how the quantity of the ultimate affects the accent:—*ἀνθρωπος, ἀνθρωποι, χωρᾱ, γλωσσᾰ, ληξαι (inf.).*

LATIN.

FRIDAY, SEPTEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Cicero, Select Letters.

CICERO ATTICO SAL.

Saturnalibus mane se mihi Pindenissitae dediderunt septimo et quinquagesimo die, postquam oppugnare eos coepimus. 'Qui, malum! isti Pindenissitae? qui sunt?' inquies; 'nomen audivi numquam.' Quid ego faciam? num potui Ciliciam Aetoliam aut Macedoniam reddere? hoc iam sic habeto, nec hoc exercitu nec hic tanta negotia geri potuisse; quae cognosce *ἐν ἐπιτομῇ*: sic enim concedis mihi proxumis litteris. Ephesum ut venerim, nosti, qui etiam mihi gratulatus es illius diei celebritatem, qua nihil me umquam delectavit magis. Inde oppidis iis, quae erant, mirabiliter accepti, Laodiceam pridie Kal. Sextiles venimus. Ibi morat,

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biduum perillustres fuimus honorificisque verbis omnes iniurias revellimus superiores; quod idem dein Apameae quinque dies morati et Synnadis triduum, Philomelii quinque dies, Iconii decem, fecimus. Nihil *ea iuris dictione* aequabilius, nihil lenius, nihil gravius. Inde in castra veni a. d. VII. Kalendas Septembres. a. d. III *exercitum lustravi* apud Iconium. Ex his castris, cum graves de Parthis nuntii venirent, perrexi in Ciliciam per Cappadociae partem eam, quae Ciliciam attingit, eo consilio, ut Armenius Artavasdes et ipsi Parthi Cappadocia se excludi putarent. Cum dies quinque ad Cybistra [Cappadociae] castra habuissem, certior sum factus Parthos ab illo aditu Cappadociae longe abesse, Ciliciae magis imminere; itaque confestim iter in Ciliciam feci per Tauri pylas. Tarsum veni a. d. III. Nonas Octobres.

2. (*a*) Explain the words printed in Italics in the above ext. (*b*) Explain the Roman method of reckoning time both as to the days of the month and as to the hours of the day. (*c*) Express the dates here given according to the English method, and expand and explain the formulas. (*d*) On what occasion and at what date was this ext. written?

3. Translate:—(B) Livy, Book V.

Equidem haud abnuerim Clusium Gallos ab Arrunte seu quo alio Clusino adductos; sed eos, qui oppugnaverint Clusium, non fuisse qui primi Alpes transierint, satis constat. ducentis quippe annis ante quam Clusium oppugnarent, urbemque Romam caperent, in Italiam Galli transcenderunt; nec cum his primum Etruscorum sed multo ante cum iis, qui inter Appenninum Alpesque incolebant, saepe exercitus Gallici pugnavere. Tuscorum ante Romanum imperium late terra marique opes patuere. mari supero inferoque, quibus Italia insulae modo cingitur, quantum potuerint nomina, sunt argumento, quod alterum Tuscum, communi vocabulo gentis, alterum Atriaticum mare ab Atria Tuscorum colonia vocavere Italicae gentes; Graeci eadem Tyrrhenum atque Adriaticum vocant. et in utrumque mare vergentes incoluere urbibus duodenis terras, prius cis Appenninum ad inferum mare, postea trans Appenninum totidem, quot capita originis erant, coloniis missis, quae trans Padum omnia loca excepto Venetorum angulo, qui sinum circumcolunt maris, usque ad Alpes tenuere. Alpinis quoque ea gentibus haud dubie origo est, maxime Raetiis; quos loca ipsa efferarunt, ne quid ex antiquo praeter sonum linguae, nec eum incorruptum, retinerent.

4. (*a*) Explain the geographical references of Ext. (B), giving modern names where you can. (*b*) What was the ethnological relationship of the Galli? (*c*) By what names were the Etrusci designated (1) by themselves and (2) by the Greeks?

5. Translate:—(C) Virgil, Book VI.

Hectoris hic magni fuerat comes, Hectora circum
Et *lituo pugnas* insignis obibat et *hasta*.
Postquam illum *vita* victor spoliavit Achilles,

Dardanio Aeneae sese fortissimus heros
Addiderat socium, non inferiora secutus.
Sed tum, forte cava dum *personat* aequora concha,
Demens, et cantu vocat in certamina divos,
Aemulus exceptum Triton, si credere dignum est,
Inter saxa virum spumosa inmerserat unda.
Ergo omnes magno circum clamore fremebant,
Praecipue pius Aeneas. Tum iussa Sibyllae,
Haud mora, festinant flentes, aramque *sepulchri*
Congerere *arboribus caeloque* educere certant.
Itur in antiquam silvam, stabula alta ferarum,
Procumbunt piceae, sonat icta securibus ilex,
Fraxineaeque trabes cuneis et fissile robur
Scinditur, advolvunt ingentis *montibus* ornos.

6. (*a*) Explain the construction of the words in Italics in ext. (C). (*b*) *Hectora circum; non inferiora* secutus;—express the same in Greek and explain the usages. *Spumosa*;—with which noun do you connect the attributive, and why?

7. Give the etymology of the following, and the cognate forms of any in Greek or English:—brumali, armis, ambages, juga, postuma, caminis, mœnia, cognomine, bidentis, situ.

8. Translate:—(D) Horace, Odes, Book III.

Martius caelebs quid agam Kalendis,
Quid velint flores et acerra thuris
Plena miraris, positusque carbo in
Caespite vivo,
Docte sermones utriusque linguae?
Voveram dulces epulas et album
Libero caprum prope funeratus
Arboris ictu.
Hic dies anno redeunte festus
Corticem adstrictum pice dimovebit
Amphorae fumum bibere institutae
Consule Tullo.
Sume, Maecenas, cyathos amici
Sospitis centum et vigiles lucernas
Perfer in lucem; procul omnis esto
Clamor et ira.
Mitte civiles super urbe curas:
Occidit Daci Cotisonis agmen,
Medus infestus sibi luctuosis
Dissidet armis,

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Servit Hispanae vetus hostis orae
Cantaber sera domitus catena ;
Jam Scythae laxo meditantur arcu
Cedere campis.
Neglegens ne qua populus laboret
Parce privatus nimium cavere :
Dona praesentis cape laetus horae et
Linque severa.

9. (*a*) Give the names and schemes of the metres of ext. (D), and scan the first stanza. (*b*) Explain briefly the historical references of the same ext. (*c*) *Utriusque linguae ;*—what languages? *Amphorae ;*—what case? *Negligens cavere ;*—what peculiarity of construction?

10. (*a*) Mark the quantity of the *penultimate* of the following :—Pristinam, maritimus, infamis, parricida, illecebra, plaga (*stroke*), plaga (*district*), nitere (*imperat.*), nitere (*fut.*). (*b*) Show how the meaning of the following words differs, severally, as the quantity of the penultimate differs :—Edi, incidi, dicant, regere, utere, canis, mane, soles, pendere, oblitus, rege, levis.

HISTORY AND GRAMMAR.

TUESDAY, SEPTEMBER 19TH :—AFTERNOON, 3 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) 1. Describe the form of government prevalent in the Grecian states during the Heroic Age. State what causes operated to bring about changes in the form of government, and trace the progress of the change from the earliest form to the constitution of Athens under Cleisthenes. 2. The supremacy of Athens ;—its character, and the causes and events that led to its establishment and overthrow.

3. Describe the policy of the Persian monarchy towards the contending states in the Peloponnesian war.

4. At what period, and after what wars, was Rome mistress of Italy?

5. Enumerate the foreign possessions of Rome at the close of the period of the Republic.

(B) 1. (*a*) Contract the following vowel-combinations (Attic) :—*a*—*ε*, *a*—*η*, *ε*—*a*, *o*—*η*, *a*—*ει*, *a*—*η*, *ε*—*αι*, *a*—*ου*. (*b*) Resolve the following forms of *Crasis* :—κἀν, κἂν, χὠ, χᾧ, ἄν, οὐπί, (c) Define and illustrate *Elision* and *Apocope*.

2. Write down the *Case-endings* of nouns in Greek and Latin, respectively, and state the fundamental meaning of the several cases.

3. Decline:—λεώς, ναῦς, θρίξ, ἦπαρ, κρέας, *nix*, *sitis*, *securis*, *canis*, *caro*. What class of nouns may have the *Acc. Plu.* ending in—*is*, and why?

4. State and illustrate the leading usages of the *Genitive* and *Dative*.

5. (*a*) Give the quantity of the ultimate, and explain the formation of:—interea, præterea, propterea. (*b*) Point out the origin of quî, ibi, statim, tenus, humi. (*c*) Write down the *Pres. Inf.* of:—Ortus, mensus, aptus, pactus, iratus, fassus, adultus, exarsus.

(C) Translate into Latin:—

Last of all came the Sabines with a great army, under Titus Tatius, their king. There is a hill near to the Tiber, which was divided from the Palatine Hill by a low and swampy valley; and on this hill Romulus made a fortress, to keep off the enemy from his city. But when the fair Tarpeia, the daughter of the chief who had charge of the fortress, saw the Sabines draw near, and marked their bracelets and their collars of gold, she longed after these ornaments, and promised to betray the hill into their hands if they would give her those bright things which they wore upon their arms. So she opened a gate, and let in the Sabines, and they, as they came in, threw upon her their bright shields and crushed her to death.

MATHEMATICS.

SATURDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. Similar triangles are to one another in the duplicate ratio of their homologous sides.

2. The rectilinear figure described on the hypotenuse of a right-angled triangle is equal to the sum of the similar and similarly-described figures on the sides.

3. Inscribe a regular hexagon in a given circle.

4. On a given right line describe a segment of a circle containing an angle equal to a given one.

5. Prove $\sin A + \sin B = 2 \sin \frac{1}{2}(A + B) \cos \frac{1}{2}(A - B)$.

6. Prove $\tan (A - B) = \dfrac{\tan A - \tan B}{1 + \tan A \tan B}$.

7. Given $\sec A = 2$, find $\operatorname{cosec} A$.

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8. Express 40° in circular measure.

9. Solve the equations

$$\sqrt{4a+x} = 2\sqrt{b+x} - \sqrt{x}$$

$$\frac{ax-1}{\sqrt{ax}+1} = 4 + \frac{\sqrt{ax}-1}{2}$$

10. Find three numbers, such that the sum of the first and second shall be 7, the sum of the first and third = 8, and the sum of the second and third = 9.

11. Simplify $5\sqrt{3} \times 7\sqrt{\frac{8}{9}} \times \sqrt{2}$.

12. Extract the square root of $2x + 2\sqrt{x^2-1}$.

MATHEMATICS.

SATURDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 4.

Examiner,.....ALEXANDER JOHNSON, L.L.D.

1. A common tangent to any two circles is divided harmonically by any other circle having the same radical axis with the two given circles.

2. Given a circle and the lengths of the three diagonals of a quadrilateral inscribed in it; construct the quadrilateral.

3. If a system of circles be described cutting a given circle orthogonally, and having their centres in a given straight line, the radical axis of the system will be the perpendicular from the centre of the given circle on the given line.

4. If on the three diagonals of any quadrilateral as diameters, circles be described, any transversal meeting them is cut in six points in involution.

5. The anharmonic ratio of four fixed tangents is constant.

6. Inscribe in a given polygon another of the same number of sides, so that each of its sides shall pass through a given point.

7. Describe a circle touching a given straight line and two given circles.

8. To a given triangle exscribe a parallelogram of given area.

9. A person puts out $P at interest, and adds to his capital at the end of every year $\frac{1}{m}$th part of the interest for that year, find the amount at the end of n years.

10. Resolve $2x^2 - 21xy - 11y^2 - x + 34y - 3$ into two factors of the first degree.

11. Prove that for the Napierian base

$$log\,(1 + y) = y - \tfrac{1}{2}y^2 + \tfrac{1}{3}y \quad \text{—&c.}$$

12. Find a number such that whether it is divided into two or three equal parts, the continued product of the parts shall be the same.

SCIENCE SCHOLARSHIPS.

(1. *Mathematics.*)

DIFFERENTIAL AND INTEGRAL CALCULUS.

SATURDAY, SEPTEMBER 16TH :—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Find the radius of curvature and the evolute of the parabola $y^2 = 4ax$.

2. Prove that in all conic sections the radius of curvature is proportional to the cube of the normal.

3. If A be the area of a curve expressed in polar co-ordinates, prove

$$\frac{dA}{d\theta} = \tfrac{1}{2}r^2.$$

4. Prove the following expression for the perpendicular on the tangent to a curve in polar co-ordinates.

$$\frac{1}{p^2} = u^2 + \frac{d^2u}{d\theta^2}$$

u being the reciprocal of the radius vector.

5. Eliminate a and b from the equation

$$y = a\,cos\,mx + b\,sin\,mx.$$

6. If $$u = f(x, y)$$

investigate the expression for the development of u when x and y become $x + h$, and $y + k$.

7. Find the values of x which will make u a maximum or a minimum in the expression

$$u = x^3 - 7x^2 + 8x + 32.$$

8. Find the value, when $x = 1$, of the fraction

$$\frac{x^4 - 5x^3 + 9x^2 - 7x + 2}{x^4 - 6x^3 + 12x^2 - 10x + 3}.$$

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9. Employ McLaurin's theorem to prove

$$\overline{tan}^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \&c.$$

10. Find the integrals,

$$\int_x \frac{1}{(x^2+1)^n}; \qquad \int_x \frac{x}{(1+x+x^2)^2}$$

11. Find the integrals,

$$\int_x \frac{x^4}{\sqrt{1-x^2}} \qquad \int_x x^3 (log\ x)^3$$

12. Find the integrals,

$$\int_x (cos\ \theta)\ (6); \qquad \int_\theta \frac{1}{a + b\ cos^2 x}$$

13. Deduce the differential equation of the cycloid, the origin being at vertex,

$$\frac{dy}{dx} = \frac{\sqrt{2ax - x^2}}{x}$$

and show that its area is equal to three times the area of the generating circle.

14. Find the integral, $\int^n \theta.\ sin\ \theta.$

ANALYTICAL GEOMETRY.

SATURDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. Find the condition that two conic sections given by the general equation, should be similar even though not similarly placed.

2. Prove that the circle through the middle points of the sides of a triangle is the locus of the centres of equilateral hyperbolæ passing through its vertices.

3. Given base and product of the tangents of the halves of the base angles of a triangle; find the locus of the vertex.

4. In the parabola the locus of the extremity of the perpendicular from the focus on the tangent is a right line.

5. Find the polar equation of an ellipse, the focus being the pole.

6. Find the co-ordinates of the intersection of the tangents to the ellipse at the points $x'\ y'$, $x''\ y''$

7. The equation of the pair of tangents from any point $x' y'$ to a curve of the second degree is

$(ax'^2 + 2hx'y' + by'^2 + 2gx' + 2fy' + c)(ax^2 + 2hxy + by^2 + 2gx + 2fy + c)$
$= [ax'x + h(x'y + y'x) + by'y + g(x' + x) + f(y' + y) + c]^2.$

8. If through any point O two chords be drawn meeting a conic in the points R', R'', S', S'', then the ratio of the rectangles $\frac{OR' . OR''}{OS' . OS''}$ will be constant, whatever be the position of the point O, provided that the direction of the lines OR, OS be constant.

9. Explain how the tangent to a circle may be expressed by the equation

$$x \cos\theta + y \sin\theta = r,$$

and deduce the corresponding equation of a chord joining two given points.

10. Find the locus of the intersection of tangents to a circle at the extremities of a chord whose length is constant.

11. A right line is drawn through the intersection of two circles; find the locus of the middle point of the portion intercepted between the circles.

12. The sum of two focal chords of an ellipse drawn parallel to two conjugate diameters is constant.

13. Given a point and two fixed lines: draw any two lines through the fixed point, and join transversely the points where they meet the fixed lines; find the locus of the intersection of the transverse lines.

14. Find the angle between two given lines, the co-ordinates being *oblique*.

(SCIENCE SCHOLARSHIP AND SCOTT EXHIBITION.)

GEOMETRICAL CONICS, SOLID GEOMETRY, ALGEBRA.

TUESDAY, SEPTEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. The curve formed by the intersection of a right cone with a plane which is inclined to the axis of the cone at an angle less than the constant angle which the generating line forms with the axis, is an hyperbola.

2. The difference of the squares of any pair of semi-conjugate diameters an hyperbola is equal to the difference of the squares of the semi-axes

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3. If S, S' and C be the foci and centre respectively of an ellipse, P any point on it, and CD be conjugate to CP, prove

$$SP.\ S'P = CD^2.$$

4. If from any point a pair of tangents be drawn to an ellipse they will subtend equal angles at the focus.

5. Draw a pair of tangents to an ellipse from an external point.

6. In the parabola the subnormal is constant.

7. Every solid angle is contained by plane angles which are together less than four right angles.

8. Prove the Binomial theorem for positive integral indices.

a. Expand by it $\dfrac{1}{\sqrt[3]{1-x}}$.

9. Extract the square root of 12212 in the senary scale.

10. The number of combinations of $\frac{1}{2}n$ things, 4 together, is $3\frac{3}{4}$ of the No. of combinations of $\frac{1}{3}n$ things, 3 together; find n.

11. Find a fourth harmonical proportion to 6, 8, 12.

12. Solve the equations,

$$x - 1 = 2 + \frac{2}{\sqrt{x}};$$

$$x^{a\ b}\, y = r \quad , \quad x^{c\ d}\, y = s\ .$$

LOGIC.

MONDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Define (*a*) Term, (*b*) Proposition, (*c*) Syllogism.

2. Of the following terms, state (*a*) which are singular and which common, (*b*) which connotative and which inconnotative:—Sultan, the late Sultan; Constantinople, the Capital of Turkey; Orator, Demosthenes, the Greatest Orator of Antiquity.

3. (*a*) What is meant by the Quantity; what, by the Quality, of a Proposition? (*b*) Give the signs indicating Quantity and Quality.

4. Give the sign for each of the following propositions:—

(*a*) All negative propositions distribute their predicates;

(*b*) Some animals are not capable of locomotion;
(*c*) Some propositions are self-evident;
(*d*) None of the lower animals is endowed with speech.

5. Distinguish Subject, Predicate, and Copula in each of the above propositions.

6. Name and state the several Opposites of each of the above propositions.

7. (*a*) State the following argument in full syllogistic form, and (*b*) distinguish its several terms and propositions:—"The idea of Time must be native to the mind, for it is impossible to think anything without it."

8. (*a*) What must be the quality of the Conclusion in the Second Figure? (*b*) Explain the reason.

9. Prove from the General Canons of the Syllogism, that A A A is illegitimate in the Third figure.

10. (*a*) To what figures do Datisi, Festino, and Ferison, respectively, belong? (*b*) Explain the meaning of their significant letters.

11. State whether the following argument is legitimate, giving the reason for your answer:—"If the Immortality of the Soul is universally believed, it must be true but it is not universally believed and therefore it is not true."

12. Name the argument represented by the following formula, and analyse it, explaining the process of analysis:—A is B; B is C; C is D D is E; and E is F: therefore A is F.

13. (*a*) Explain the Fallacies, called Fallacia Accidentis, Ignora Elenchi, and Reasoning in a Circle. (*b*) Name the class to which each belongs.

14. Name the following Fallacy, and the class to which it belongs:—"Animal food may be dispensed with, as is shown by Vegetarians; and so may vegetable food, as is shown by the Esquimaux. But all food is either animal or vegetable; and therefore all food may be dispensed with."

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CHEMISTRY.

TUESDAY, SEPTEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. How much quicklime and how much slaked lime can be obtained from 120 pounds of Calcic Carbonate?

2. By what tests may Chromium and Nickel be detected when in solution?

3. Describe the production of metallic Tin from Tinstone.

4. What are the properties of the metal Magnesium? What the principal salts?

5. What percentage of Copper does Blue Vitriol contain?

6. How is Corrosive Sublimate prepared, and what are its properties?

7. Explain the following equation:

$$K_2 CO_3 + Ca H_2 O_2 = Ca CO_3 + 2 KHO.$$

8. What are the atomic weights and symbols of Gold, Zinc, Potassium, and Manganese?

9. Give the names, properties, and principal uses of the following compounds: $Ca SO_4$, $K NO_3$, $Ag NO_3$, $As_2 O_3$.

10. What is the composition of the principal ores of Iron? How is the metal obtained from them?

SCIENCE SCHOLARSHIPS.

(2. *Natural Science.*)

CHEMISTRY.

TUESDAY, SEPTEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. State and explain the law of Ampère.

2. Describe the spectroscope, explaining its use in the chemical laboratory.

3. What do you understand by water of crystallization? Distinguis between efflorescent and deliquescent salts.

4. How is Nitrous Oxide prepared, and what are its properties?

5. State the law according to which gases of different densities become intermixed?

6. What is the source of Bromine? What its properties?

7. How is White Lead prepared, and what is its composition?

8. What are the properties of the metals Bismuth and Antimony?

9. What are the best antidotes in cases of poisoning with Corrosive Sublimate and Arsenic?

10. Give examples of normal, double and acid salts.

BOTANY.

SATURDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12; AND AFTERNOON, 2 TO 5.

Examiner,..... .....J. W. DAWSON, LL.D., F.R.S.

1. Explain the nature, uses, and minute structure of Medullary Rays.

2. State the parts of a complete leaf, and their normal arrangement. Describe the stomata of any leaf.

3. Describe histologically the Spine, Prickle, Thorn, Hair.

4. Explain the homologies of the parts in the Flower-bud and Leaf-bud.

5. Give an account of the normal process of fertilization, and explain some of the varieties in its details.

6. State the characters of Acrogens, and define the principal subdivisions of the group.

7. Describe the Capsule of a Moss, and explain its derivation from the Pistilidium or Archegonium.

8. Explain the growth of the Cambium Layer.

9. Indicate in a tabular form the leading subdivisions of the vegetable kingdom, with their distinctive characters.

10. Name the tribes of Canadian *Rosaceæ*, and give their characters.

11. Explain fully the distinctive characters of *Lycopodiaceæ* and *Filices*.

12. What are the principal Canadian genera of *Leguminosæ* and *Orchidaceæ*? characterize one of them.

13. What orders afford our principal timber trees?—characterize one of them.

14. Describe and illustrate, with examples, the genera *Polypodium*, *Arum*, *Ranunculus*, *Pyrola*.

15. What genera most contribute to the colouring of fields in autumn? State the orders to which they belong.

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16. Describe and refer to their orders the genera *Sanguinaria*, *Uvularia*, and *Trillium*.

17. Describe any Canadian genus of aquatic Phænogam, with examples

18. State what you know of the Canadian species of *Cornus*, *Hypericum*, and *Saxifraga*.

Examination in Specimens, Tuesday, Sept. 19th, 9 a.m. to 12 noon.

CLASSICAL AND MODERN LANGUAGE SCHOLARSHIPS.

GREEK.

FRIDAY, SEPTEMBER 15TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Euripides, Medea, vss. 324—340.

2. (*a*) *μὴ πρὸς σὲ γούνων*:—explain the construction. *ἀναλοῖς, ἐξελᾷς*:—parse and explain the use of the optative in 325. (*b*) vss. 37 and 318, *μή τι βουλεύσῃ νέον*, and *μή τι βουλεύῃς κακον*:—give the exact distinction between these two forms of expression. vss. 315, 411, and 456, *κρεισσόνων νικώμενοι, θεῶν πίστις, ἀνίης μωρίας*:—construe, and explain the use of the Genitive in these several expressions. (*c*) Write down the scales of the *Iambic Senarius* and of the *Anapaestic Dimeter Acatalectic*.

3. Translate:—(B) Demosthenes, Olynthiacs, II., sec. 24:—from *εἰ δέ τις ὑμῶν* down to *δεῖ περιῆμεν*.

4. Explain the construction of:—(*a*) *εὔνοιαν ἔχειν*. (*b*) *φοβερὸν προσπολεμῆσαι*. (*c*) *μή τί γε δὴ τοῖς θεοῖς*. (*d*) *ἡμῶν μελλόντων*. (*e*) *αὐτὸν ἀργοῦντα*.

5. Translate:—(C) Xenophon, Hellenics, I., chap. vi., secs. 35-37.

6. (*a*) Give the name and date of the battle that preceded the events of ext. (C). (*b*) Explain the meaning of:—(1) *ἔθνε τὰ εὐαγγέλια*, (2) *ὁ ὑπηρετικὸς κέλης*. (3) *τοὺς ἐν ἡλικίᾳ ὄντας*. (4) *καὶ τοὺς ἐπιβάτας εἰς κοίλην ναῦν μεταβιβάσας*. (*c*) Give the Geographical positions, severally, of the following places, with the modern names of any:—Malea. Agrigentum, Decelea, Chrysopolis, Byzantium, Phocaea, Heraclea, Coryphasium.

7. Translate:—(D) Herodotus, Book VIII., chap. cxv.

8. Give an account of the dialect used by Herodotus, and turn the following words into the Common dialect:—*ὧν, ποιέει, ἑωυτοῦ, ἀπίκατο, ὅτεῳ, ἀληθέα, πλώοντες, θύρῃσι, νῆας, πείθεο, πλεῦνες.*

9. Translate:—(E) Thucydides, Book. I., chap. lxxxix.

10. (*a*) By what name are chaps. 86–118 known and why? How do they connect with the history of Herodotus? (*b*) Construe carefully the first sentence of sec. 3 of (E) defining the use of *αὐτοῖς*, and of *παῖδας καὶ γυναῖκας* without the article.

LATIN.

SATURDAY, SEPTEMBER 16TH:—MORNING, 9 to 12

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Tacitus, Annals, Book I., chap. xliv.

2. (*a*) Write explanatory notes on:—(1) Pro *contione*. (2) *Centurionatum* egit. (3) *In verba* Tib. *Caesaris juravere*. (4) Quot *tributa* aut *vectigalia*. (5) Decreta *triumphalia insignia*. (*b*) Puniret * * * tradentur:—turn the sentence into the *oratio recta*. (*c*) Comment on the changes of mood in *fecissent*—cui *erant; adprobaverant—objectavissent*.

3. Translate:—(B) Cicero, Select Letters, epist. xxxvii.

4. (*a*) "Dolabellae":—Give his name in full, and state what you know about him. (*b*) Explain the system of Roman names as illustrated by the name Publius Cornelius Scipio Africanus Aemilianus. Was the Agnomen hereditary? (*c*) D. pr. Kal. Iun.— A. d. X. Kal. Mai.:—Write out the full expressions for these forms, and give the dates.

5. Translate:—(C) Horace, (*a*) Satires I., sat. vi., vss. 45-62. (*b*) Epistles, I, ep. ix.

6. (*a*) "Libertino patre natum"; "mihi pareret legio"; "Te sortitus amicum:"—Explain these personal references on the part of Horace. (*b*) 'Claudi':—Who was this? (*c*) Frontis urbanae praemia:—How do you interpret? (*d*) Tui gregis:—What construction?

(7) Translate:—(D) Terence, Adelphi, Act IV., sc 2, vss. 1-21.

8. (*a*) Explain the following forms:—Produxe, aibas, patrissas, tantillum, perquam, sursum, illic, ruri, sis, cedo. (*b*) Construe *gentium, malum*, and *infelicitatis* in ext. (D). (*c*) What is the force of the preposition in *obnuntio*?

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9. Translate :—(E) Virgil, Georgics, Book I. vss. 311-327. Write a short account of the *Georgics* of Virgil.

10. Give the meanings of the Singular and Plural of :—*carcer, copia, rostrum, littera, sal, impedimentum, aedes, auxilium.* Write down the Genitive Plural of :—*poema, bos, caro, lis, ordo, mas.* Give the Comparative and Superlative of :—*nequam, frugi, intra, prope, ultra, diu.*

GREEK AND LATIN PROSE COMPOSITION.

FRIDAY, SEPTEMBER 15TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek :—

1. A certain man who had heard of the victory that had been gained came running into the city to tell the good news to the citizens. He further reported that on the side of the victors only one general and three hundred light-armed and one hundred and fifty heavy-armed soldiers had fallen, whilst of the vanquished not less than two thousand had been slain. The defeated generals led away their forces by night. 2. Having said this he went away, and after he had gone those who had listened to him took counsel on what he had proposed.

(B) Translate into Latin :—

So after a time thirty cities of Latins joined together, and made Octavius Mamilius their general, and declared war against the Romans. Now Publius Valerius was dead, and the Romans so loved and honoured him that they buried him within the city near the hill Velia, and all the matrons of Rome mourned for him for a whole year; also because the Romans had the Sabines for their enemies as well as the Latins, they made one man to be their ruler for a time instead of two ; and he was called the Master of the people, or the commander, and he had all the power which the kings of Rome had in times past. So Aulus Postumius was appointed master of the people at this time, and Titus Aebutius was chief or master of the Horsemen ; and they led out the whole force of the Romans and the Latins by the lake Regillus, in the country of Tusculum.

ANCIENT HISTORY.

SATURDAY, SEPTEMBER 16TH :—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. Give an account of the country, race, commerce and colonies of the Phœnicians. Name the chief ancient and modern authorities for their history.

2. State the leading events in the second period of the history of the Jews. Under what King did the nation reach its highest point of power and prosperity? What causes led to its decadence?

3. To which of the three great races of mankind did the Persians belong? Give an account of their system of government, and of their military conquests up to the time of the war with Greece. What was the main motive for the persistence of the Persian aggression on the Hellenic race? To what causes may the failure of this aggression be attributed?

4. Trace briefly the growth of the leading Grecian States, naming those that in succession held the hegemony of Greece.

5. What was the Achæan League, and for what objects was it formed?

6. The physicial geography of ancient Italy. Name the principal races by which it was at the earliest times inhabited.

7. Give an account of the Law of Debt at Rome, and point out how its operation acquired political importance and led to political changes.

8. What were the true character and objects of the *Leges Agrariae?*

9. What were the causes and events that led to the Punic wars?

10. Who were the members of the *First* and *Second Triumvirates*, severally?

ENGLISH LITERATURE.

FRIDAY, SEPTEMBER 15TH :—MORNING, 9 TO 12.

Examiner, ...VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the principal productions in Anglo-Saxon, with a short account of each.

2. State the different periods into which the history of English Literature is divided.

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3. Give some account of the Irregular Latin Literature of the 12th and 13th Centuries.

4. Mention the principal remains of the English tongue in its transition state (Semi-Saxon).

5. Give an outline of the history of Literature in Scotland during the 14th and 15th Centuries.

6. Give the substance of Spalding's remarks on the predominating influences that affected English Literature during the early years of the 16th Century.

7. Give some account of the English Drama in the Middle Ages and in the 16th Century.

8. Give the names of the great literary men in the reigns of Elizabeth, James I. and Charles I., and during the Commonwealth.

9. Describe the Classical and Romantic schools of dramatic poetry.

10. Give Spalding's classification of the non-dramatic kinds of Poetry, with some explanation of each.

11. Describe the social and literary character of the period of the Restoration.

12. Give the names of the principal writers in prose and poetry during the age of the Restoration and Revolution.

13. Describe the influence of the French writers on the prose and poetry of the English during that age.

14. What was the literary character, as described by Spalding, of the first generation of the 18th Century.

ANGLO-SAXON GRAMMAR.

FRIDAY, SEPTEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Which are the Anglo-Saxon Articles? Decline one.

2. Decline "se ende," "thaet word," "thaet tungel," "witega," "attila," "brothor," "mann."

3. Give the signification of the following terminations of Compound Nouns,—dom, ere er, ern, estre, ing, nes, ric, scipe, ung, mid, mis, un ou an in.

4. Write a synopsis of the declensions of Adjectives.

5. Compare the Regular Adjective, smael, and the Irregular, eald, feor god, heah, lytel, my cel.

6. Compare the Adverbs, raethe, rihtlice.

7. Which are the Adjective Pronouns, and how are they declined?

8. Into what Orders, Conjugations and Classes are Anglo-Saxon Verbs divided, exclusive of the mixed and anomalous?

9. Conjugate the Verbs, wesan, beon, weorthan.

10. Translate and give the rules of Syntax for the following phrases and sentences:—

Eall thaet folc arás and stódon.
Ne synd ná this wodes mannes word.
On thinum tham hálgum naman.
Ealles his maegnes.
Him thencendum.

BACON'S ESSAYS.—TRENCH, ON THE STUDY OF WORDS, AND ENGLISH PAST AND PRESENT.

FRIDAY, SEPTEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give an outline of the life of Lord Bacon.

2. Enumerate his principal works, and give a particular account of the Essays.

3. Mention his remarks, the most strlking of them you can recollect, on the subjects of Death and Superstition.

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4. Give some examples of the double adoption of Latin words.

5. Mention the words in the Lord's Prayer that are not of Saxon origin.

6. Show that the grammatical structure of English is Saxon.

7. Describe the two periods during which our language received the largest accessions of Latin words.

8. Mention the reasons given for seeking new words.

9. Show that there is going on continually an extinction of the words of our language.

10. Give some examples of alteration of the spelling of words caused by erroneous derivation.

11. Give the substance of the remarks on the subject of the origin of language.

12. Give some examples of the agreement between names and things.

13. Show that words often embody past customs.

14. What are heterodynamic words? Give examples.

15. Give some examples of "Derivations lost sight of."

FRENCH,

TUESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Mention the two leading characters in the 3 tragedies of Racine; *Britannicus, Andromaque, Iphigénie.* In what does the interest consist in each of those tragedies? Which is the most tragical, and which is the most beautiful?

2. Translate into English:

BRIT.—Narcisse, tu dis vrai; mais cette défiance (*a*)
Est toujours d'un grand cœur la dernière science;
Ou (*b*) le trompe toujours. Mais enfin je te croi (*c*),
Ou plutôt je fais vœu de ne croire que toi.
Mon père (*d*) il m'en souvient, m'assura de ton zèle:
Seul de ses affranchis tu m'es toujours fidèle;
Tes yeux, sur ma conduite incessamment ouverts,
M'ont sauvé jusqu'ici de mille écueils couverts.
Va donc voir si le bruit (*e*) de ce nouvel orage
Aura de nos amis excité le courage.
Examine leurs yeux (*f*), observe leurs discours;
Vois si j'en puis attendre un fidèle secours.
Surtout dans ce palais remarque avec adresse
Avec quel soin Néron fait garder la princesse (*g*):
Sache (*h*) si du péril ses beaux yeux sont remis,
Et si son entretien (*i*) m'est encore permis.
Cependant de Néron je vais trouver la mère
Chez Pallas, comme toi l'affranchi de mon père:
Je vais la voir, l'aigrir, la suivre, et s'il se peut
M'engager sous son nom plus loin qu'elle ne veut.—*Britannicus, Act IV*

a. Explain fully the difference of meaning of *défiance* between the French and the English.

b. To what do the words *on* and *le* refer?

c. Why is *croi* so written? How would be the regular form?

d. Who was his father?

e. What are the different meanings of *bruit*?

f. For what word is *yeux* used here?

g. What Princesse?

h. What are the different meanings of *entretien*?

i. Write in full all the simple tenses of that verb.

4. When do the French write proper names with the mark of the plural? Give the rule and illustrate it by examples.

5. State 4 cases when the pronouns *I, thou, he, they*, are translated by

6. When is the pronoun *ce* followed by the verb in the singular, and then in the plural? Give examples.

7. Translate into French:

John Locke, better known as a metaphysician than as an educationist, was born at Wrington, in Sommersetshire, in 1632. Of his father nothing noteworthy is recorded, except that he possessed a moderate landed property, and was a captain in the Parliamentary army during the Civil War. Having received his elementary education at Westminster School, Locke entered Christ College, Oxford, in 1651, where he was distinguished among his fellow-students by his talents and learning. His nephew and biographer, Lord King, informs us that Locke had in the course of his life the choice of three distinct roads to fortune, and, perhaps, to celebrity: the temptation of considerable preferment in the church, the practice of physic as a profession, and the opportunity of engaging in diplomatic employments. He made choice, in the first place, of the second of these roads, and, after the usual course of preparation, entered upon the practice of medicine, for which he cherished a fondness during his whole life.

LEITCH, *Practical Educationists.*

SCOTT EXHIBITION.*

ZOOLOGY.

TUESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,..... .....J. W. DAWSON, LL.D., F.R.S.

1. State the distinctive characters of the *Rhizopoda*, with examples or Canadian genera.

2. Characterize the *Rugosa* and *Tabulata*, and state their affinities with modern corals.

3. State the distinctive characters and geological distribution of *Atrypa*, *Terebratula*, *Leptæna* and *Orthis*.

4. Describe the anatomy of *Echinus*.

5. What are the most important recent and fossil genera of Dibranchiate *Cephalopoda?*

6. What are the zoological relations of *Murchisonia*, *Orthoceras*, *Asaphus*, and in what formations do they occur?

7. Name the leading divisions of the *Crustacea*, and state their distinctive characters.

8. Describe the structures of *Mytilus*.

9. State the zoological relations of *Favosites*, *Calymene*, *Natica*, *Nereis*, *Cyanea*, *Lepralia*.

10. State what you know of the specimens exhibited.

ENGLISH LITERATURE, &c.

SATURDAY, SEPTEMBER 15TH:—MORNING, 9 TO 12.

Examiner, ...VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the principal poetical productions in Anglo-Saxon, with a short account of each.

2. State the different periods into which the history of English Literature is divided.

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* For Paper in *Mathematics*, *see pp.* 19 *and* 20.

3. Give some account of the Irregular Latin Literature of the Twelfth and Thirteenth Centuries.

4. Mention the principal literary remains of the English tongue in its transition state (Semi-Saxon.)

5. Give an outline of the history of Literature in Scotland during the 14th and 15th Centuries.

6. Give the substance of the remarks upon the predominating influences that affected English Literature during the early years of the 16th Century.

7. Give some account of the English Drama in the Middle Ages, and of its beginnings in the 16th Century.

8.—Give the names of the great literary men in the reigns of Elizabeth, James I., and Charles I., and during the period of the Commonwealth.

9. Describe the Classical and Romantic schools of Dramatic poetry.

10. Give the substance of Dr. Johnson's remarks on the metaphysical poets (Life of Cowley); with some of the examples of their wit and conceits.

11. What are Johnson's opinions on the introduction of physical subjects into the course of teaching in schools (Life of Milton)?

12. Give the history of Milton's *Defensio Secunda*.

13. Give the substance of the remarks on the religious opinions and practice of Milton.

14. What are Johnson's reasons for the assertion that devotion poetry cannot often please?

15. Enumerate the principal works of Dryden and the three poets that are said, two of them to have improved, and the third to have perfected English versification.

16. What was the rule of the Anglo-Saxons in regard to succession to the Crown.

17. What was the nearest approach to a regular jury in the Anglo-Saxon age?

18. Describe the tenures of land designated bocland and folkland and mention the several burdens to which all the freehold lands of England were subject during the said age.

19. Give the substance of Hallam's remarks on Magna Charta.

20. Which are the concurrent causes mentioned by Hallam for the tendency to civil equality in the English law?

21. Mention the several constitutional principles established for the authority of Parliament during the reigns of Edward III. and his successors to Henry VI.

HISTORY.—STUDENT'S HUME.

FRIDAY, SEPTEMBER 15TH :—FROM 9 A.M. TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give an account of the Religion of the Ancient Britons.

2. What are the principal circumstances that show the extent of Roman Civilization in Britain?

3. Give the substance of Hume's remarks on the history of Normandy.

4. Give an outline of the history of Thomas à Becket.

5. Mention the principal events that mark the reign of Edward III., and describe his character.

6. What are the chief things stated as characterizing the reign of the house of Plantagenet?

7. Give an outline of the history of Cardinal Wolsey.

8. Mention the chief events that occurred in the reign of Queen Mary.

9. Give the substance of Hume's remarks on the appearance of the Sect of the Puritans.

10. Give an outline of the history of the Spanish Armada.

11. What were the principal measures that brought about the Civil War in the time of Charles I.?

12. What were the conditions upon which the Parliament expressed its willingness to come to an agreement with Charles immediately before his deciding upon War?

13. What were the requirements of the Corporation Act and of the Act of Uniformity in Charles II.'s reign?

14. Give an outline of the history of the Duke of Monmouth.

15. What was the Test Act?

CHRISTMAS EXAMINATIONS, 1876.

CLASSICS.

FIRST YEAR.

GREEK.—HOMER—ILIAD, BOOK VI.

TUESDAY, DECEMBER 12TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Τὸν δ' αὖθ' Ἱππολόχοιο προσηύδα φαίδιμος υἱός
"Τυδείδη μεγάθυμε, τίν γενεὴν ἐρείνεις;
οἵη περ φύλλων γενεή, τοίη δὲ καὶ ἀνδρῶν.
φύλλα τὰ μὲν τ' ἄνεμος χαμάδις χέει, ἄλλα δέ θ' ὕλη
τηλεθόωσα φύει, ἔαρος δ' ἐπιγίγνεται ὥρην·
ὣς ἀνδρῶν γενεὴ ἡ μὲν φύει, ἡ δ' ἀπολήγει·
εἰ δ' ἐθέλεις καὶ ταῦτα δαήμεναι, ὄφρ' εὖ εἰδῇς
ἡμετέρην γενεήν, πολλοὶ δέ μιν ἄνδρες ἴασιν·
ἔστι πόλις Ἐφύρη μυχῷ Ἄργεος ἱπποβότοιο,
ἔνθα δὲ Σίσυφος ἔσκεν, ὃ κέρδιστος γένετ' ἀνδρῶν,
Σίσυφος Αἰολίδης· ὁ δ' ἄρα Γλαῦκον τέκεθ' υἱὸν,
αὐτὰρ Γλαῦκος ἔτικτεν ἀμύμονα Βελλερόφοντην·
τῷ δὲ θεοὶ κάλλος τε καὶ ἠνορέην ἐρατεινὴν
ὤπασαν. αὐτάρ οἱ Προῖτος κακὰ μήσατο θυμῷ,
ὃς ῥ' ἐκ δήμου ἔλασσεν, ἐπεὶ πολὺ φέρτερος ἦεν,
Ἀργείων· Ζεὺς γάρ οἱ ὑπὸ σκήπτρῳ ἐδάμασσεν·

(B) Ὣς ἔφαθ', ἡ δὲ μολοῦσα ποτὶ μέγαρ' ἀμφιπόλοισιν
κέκλετο· ταὶ δ' ἄρ' ἀόλλισσαν κατὰ ἄστυ γεραιάς.
αὐτὴ δ' ἐς θάλαμον κατεβήσετο κηώεντα,
ἔνθ' ἔσαν οἱ πέπλοι παμποίκιλοι, ἔργα γυναικῶν
Σιδονίων, τὰς αὐτὸς Ἀλέξανδρος θεοειδὴς
ἤγαγε Σιδονίηθεν, ἐπιπλὼς εὐρέα πόντον,
τὴν ὁδὸν ἣν Ἑλένην περ ἀνήγαγεν εὐπατέρειαν.
τῶν ἓν' ἀειραμένη Ἑκάβη φέρε δῶρον Ἀθήνῃ,
ὃς κάλλιστος ἔην ποικίλμασιν ἠδὲ μέγιστος,
ἀστὴρ δ' ὡς ἀπέλαμπεν· ἔκειτο δὲ νείατος ἄλλων.
βῆ δ' ἰέναι, πολλαὶ δὲ μετεσσεύοντο γεραιαί.

(C) Ὣς εἰπὼν οὐ παιδὸς ὀρέξατο φαίδιμος Ἕκτωρ.
ἀψ δ' ὁ πάϊς πρὸς κόλπον ἐϋζώνοιο τιθήνης
ἐκλίνθη ἰάχων, πατρὸς φίλου ὄψιν ἀτυχθεὶς,
ταρβήσας χαλκόν τε ἰδὲ λόφον ἱππιοχαίτην,
δεινὸν ἀπ' ἀκροτάτης κόρυθος νεύοντα νοήσας.
ἐκ δ' ἐγέλασσε πατὴρ τε φίλος καὶ πότνια μήτηρ.
αὐτίκ' ἀπὸ κρατὸς κόρυθ' εἵλετο φαίδιμος Ἕκτωρ,
καὶ τὴν μὲν κατέθηκεν ἐπὶ χθονὶ παμφανόωσαν·
αὐτὰρ ὅγ' ὃν φίλον υἱὸν ἐπεὶ κύσε πῆλε τε χερσὶν,
εἶπεν ἐπευξάμενος Διί τ' ἀλλοισίν τε θεοῖσιν

2. Explain carefully the following constructions:—(*a*) *ἀφνειὸς βιότοιο.* (*b*) *πυρὸς δηίοιο θέρηται.* (*c*) *χαρείη δὲ φρένα μήτηρ.* (*d*) *ἐπὴν τὰ πρῶτα γένηται.* (*e*) *ἵππῳ γὰρ οἱ ἀτυζομένῳ πεδίοιο.* (*f*) *ἐνάρων ἐπιβαλλόμενος.*

3. Write down the *Nom. Sing.* of the following and decline them:—*κόρυθος, δουρός, κρατός, στήθεσι, κληῖδι, εὐρέα, οἰεσσιν, χήτει.*

4. Distinguish between the following as to their meaning:—*κράτος, κρατός. θέων, θεῶν. φώς, φῶς. ἀνα, ἀνά,* and *ἀν. εἶπε, εἰπέ. ὁ πόσις, ἡ πόσις. ὁ οὐδός, ἡ οὐδός. εἰς, εἶς,* and *εἰς. ἤδη, ἤδη.*

5. Parse the following verbs:—*μεθίης, γόον, κατέδυ, πῆλε, χαρείη, ὀρέξατο, ἀνώγει, ἀπόερσε, ἐπιπλώς, χάνοι, πίησθα, οὖτα.* Give the different meanings of *οιος* according to differences of Breathing and Accent.

6. Give the Attic equivalents of:—*φάν, δόμοιο, βείω, καταξέμεν, ξεστῆς, κάρη, εὖτε, κέν.*

7. Give the etymology and meaning of:—*πέπον, κοῦριν, λάξ, γλαυκῶ —πις, πυμάτη, φεριστε, ἐξοχον, ξεινήια, πόσις, νήπιον.*

8. (*a*) Define and illustrate by example, what is meant by *Tmesis, Anastrophe, Zeugma, Arsis, Thesis.* (*b*) Name the Metre of the Iliad and write down the scale. (*c*) Scan the first three vss. of ext. (B).

9. (*a*) What is meant by Augment and Reduplication, and what are they used to denote? (*b*) With what Moods are *εἰ* and *ἐὰν* severally used. (*c*) Write down the Aorist and Future (1st. Sing.) of:—*βούλομαι, ἐλαύνω, διαφθείρω, εὑρίσκω, φέρω.* (*d*) Show how the relative position of the Article with other Pronouns modifies the meaning of statements.

10. A short account of the birth-place, life and poetry of Homer.

SECOND YEAR.

GREEK.—EURIPIDES.—MEDEA.

MONDAY, DECEMBER 12TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Ἔγνωκε δ' ἡ τάλαινα συμφορᾶς ὕπο
οἷον πατρί᾽ας μὴ ἀπολείπεσθαι χθονός.
στυγεῖ δὲ παῖδας οὐδ' ὁρῶσ' εὐφραίνεται.
δέδοικα δ' αὐτὴν μή τι βουλεύσῃ νέον·
βαρεῖα γὰρ φρὴν, οὐδ' ἀνέξεται κακῶς
πάσχουσ'· ἐγ᾽ὰ δα τήνδε, δειμαίνω τέ νιν
μὴ θηκτὸν ὥσῃ φάσγανον δι' ἥπατος,
σιγῇ δόμους ἐσβᾶσ', ἵν' ἔστρωται λέχος,
ἢ καὶ τύραννον τόν τε γήμαντα κτάνῃ
κἄπειτα μείζω ξυμφορὰν λάβῃ τινά·
δεινὴ γάρ· οὗτοι ῥᾳδίως γε συμβαλὼν
ἐχθραν τις αὐτῇ καλλίνικον ἄσεται.
ἀλλ' οἵδε παῖδες ἐκ τρόχων πεπαυμένοι
στείχουσι, μητρὸς οὐδὲν ἐννοούμενοι
κακῶν, νέα γὰρ φροντὶς οὐκ ἀλγεῖν φιλεῖ.

(B) ΧΟ. ἀνω ποταμῶν ἱερῶν χωροῦσι παγαὶ,
καὶ δίκα καὶ πάντα πάλιν στρέφεται.
ἀνδράσι μὲν δόλιαι βουλαὶ, θεῶν δ'
οὐκέτι πίστις ἄραρε.
τὰν δ' ἐμὰν εὐκλειαν βιοτὰν στρέψουσι φᾶμαι.
ἔρχεται τιμὰ γυναικείῳ γένει·
οὐκετι δυσκέλαδος φάμα γυναῖκας ἕξει.
μοῦσαι δὲ παλαιγενέων λήξουσ' ἀοιδᾶν
τὰν ἐμὰν ὑμνεῦσαι ἄπιστοσύναν.
οὐ γὰρ ἐν ἀμετέρᾳ γνώμᾳ λύρας
ὤπασε θέσπιν ἀοιδὰν
Φοῖβος, ἀγήτωρ μελέων· ἐπεὶ ἀντάχησ' ἂν ὕμνον
ἀρσένων γέννᾳ· μακρὸς δ' αἰὼν ἔχει
πολλὰ μὲν ἀμετέραν ἀνδρῶν τε μοῖραν εἰπεῖν.

(C) Ἐνταῦθα μέντοι τόνδ' ἀπαλλάσσω λόγον·
ζήμωξα δ' οἷον ἔργον ἐστ' ἐργαστέον
τοὐντεῦθεν ἡμῖν· τέκνα γὰρ κατακτενῶ
τἀμ'· οὔτις ἐστὶν ὅστις ἐξαιρήσεται·
δόμον τε πάντα συγχέασ' Ἰάσονος
ἔξειμι γαίας, φιλτάτων παίδων φόνον
φεύγουσα κἀ τλᾶσ' ἔργον ἀνοσιώτατον.

οὐ γὰρ γελᾶσθαι τλητὸν ἐξ ἐχθρῶν, φίλαι.
ἴτω· τί μοι ζῆν κέρδος; οὔτε μοι πατρὶς
οὔτ' οἰκός ἐστιν οὔτ' ἀποστροφὴ κακῶν.
ἡμάρτανον τόθ' ἡνίκ' ἐξελίμπανον
ὁόμους πατρῴους, ἀνδρὸς Ἕλληνος λόγοις
πεισθεῖσ', ὃς ἡμῖν ξὺν θεᾷ τίσει δίκην.
οὔτ' ἐξ ἐμοῦ γὰρ παῖδας ὀψεταί ποτε
ζῶντας τὸ λοιπὸν οὔτε τῆς νεοζύγου
νύμφης τεκνώσει παιδ', ἐπεὶ κακὴν κακῶς
θανεῖν σφ' ἀνάγκη τοῖς ἐμοῖσι φαρμάκοις.
μηδείς με φαύλην κἀσθενῆ νομιζέτω
μηδ' ἡσυχαίαν, ἀλλὰ θατέρου τρόπου,
βαρεῖαν ἐχθροῖς καὶ φίλοισιν εὐμενῆ·
τῶν γὰρ τοιούτων εὐκλεέστατος βίος.

2. (*a*) In ext. (A) explain the meaning of vss. 7–9. (*b*) ib. ἐκ τρόχων πεπαυμένοι:—(*c*) In ext. (B) construe the sentence μοῦσαι * * * ἀπιστοσύναν. (*d*) Write down the Doric forms, with their Attic equivalents, in the same ext.

3. Explain the syntax of the following, and point out any varieties of reading that occur:—(*a*) ἀνδάνουσα φυγῇ πολίτας ὧν ἀφίκετο χθόνα. (*b*) ὥσθ' ἱμερός μ' ὑπῆλθε γῆ τε κοὐρανῷ λέξαι μολούσῃ δεῦρο δεσποίνης τύχας. (*c*) δῆλον δ' ἀρχῆς ἐξαιρόμενον νέφος οἰμωγῆς ὡς ταχ' ἀνάψει μείζονι θυμῷ.

4. Write short explanatory notes (grammatical) on the following usages:—(1) ἦσθετ' ἠδικημένη. (2) ἀτιμάσας ἔχει. (3) μή τι βουλεύσῃ—βουλεύῃ—νέον. (4) ἤ τ'—ἦν τ'—ἐγήματο. (5) κοὐ πόνων κεχρήμεθα. ξυμφορᾷ κεχρημένους. (6) πρόθυμος μᾶλλον ἢ σοφωτέρα. (7) πρὸς ἰσχύος χάριν (8) οὐδὲ ταῦτ' ἐπήνεσα.

4. Parse the following words:—τοῦ, πεσεῖν, ἥπατος, κέκρανται, ἄζυγες, ἀναλοῖς, του, σφ', ἑλᾶν, τεύξει, ἀνέπτα, δεδόκησαι.

6. Give the meaning and derivation of:—ξύμβολα, ζηλωτόν, ἀβρῶς, ἕκατι, στόμαργον, δυσίατος αἰσυμνᾷ, ἐξαντληκέναι, ἀρτίφρων, ἐχεγγύους, κίβδηλος, ἄζυγες.

7. State, with examples, the substance of tho remarks of Dawes, Elmsley, and Jelf as to the use of the particles οὐ μή with the *Fut. Ind.* and *Aor. Subj.*, respectively.

8. Illustrate the different meanings of the following, according as their accentuation and, in the case of some, breathings differ:—ουν παρα, σιγα, καλων, κακης, αλλα, οιος, αγγειλαι.

9. Explain the processes called *Elision* and *Crasis*, and give examples in ἐπὶ ἑτέρῳ, καὶ αὐτός, ὁ ἀνήρ. (*b*) Give the equivalents of—ἐγῴμαι, ἐμοὐστι, κᾆτα.

10. Write down the scheme (1) of the Iambic Trimeter Acatalectic, of the Tragedians; and, (2) of the Anapaestic Dimeter Acatalectic, indicating the isochronous feet. Scan the last four verses of ext. (A).

THIRD YEAR.

GREEK.—DEMOSTHENES.—OLYNTHIACS I. AND II.

THURSDAY, DECEMBER 14TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Τί οὖν, τὶς ἂν εἴποι, ταῦτα λέγεις ἡμῖν νῦν; ἵνα γνῶτε, ὦ ἄνδρες Ἀθηναῖοι, καὶ αἴσθησθε ἀμφότερα, καὶ τὸ προίεσθαι καθ' ἕκαστον ἀεί τι τῶν πραγμάτων ὡς ἀλυσιτελές, καὶ τὴν φιλοπραγμοσύνην ἣ χρῆται καὶ συζῇ Φίλιππος, ὑφ' ἧς οὐκ ἔστιν ὅπως ἀγαπήσας τοῖς πεπραγμένοις ἡσυχίαν σχήσει. εἰ δ' ὁ μὲν, ὡς ἀεί τι μεῖζον τῶν ὑπαρχόντων δεῖ πράττειν, ἐγνωκὼς ἔσται, ὑμεῖς δέ, ὡς οὐδενὸς ἀντιληπτέον ἐῤῥωμένως τῶν πραγμάτων, σκοπεῖσθε εἰς τί ποτ' ἐλπὶς ταῦτα τελευτῆσαι. πρὸς θεῶν, τίς οὕτως εὐήθης ἐστὶν ὑμῶν, ὅστις ἀγνοεῖ τὸν ἐκεῖθεν πόλεμον δεῦρο ἥξοντα, ἂν ἀμελήσωμεν; ἀλλὰ μὴν εἰ τοῦτο γενήσεται, δέδοικα, ὦ ἄνδρες Ἀθηναῖοι, μὴ τὸν αὐτὸν τρόπον, ὥςπερ οἱ δανειζόμενοι ῥᾳδίως ἐπὶ τοῖς μεγάλοις τόκοις μικρὸν εὐπορήσαντες χρόνον ὕστερον καὶ τῶν ἀρχαίων ἀπέστησαν, οὕτω καὶ ἡμεῖς, ἂν ἐπὶ πολλῷ φανῶμεν ἐῤῥᾳθυμηκότες, καὶ ἅπαντα πρὸς ἡδονὴν ζητοῦντες, πολλὰ καὶ χαλεπὰ ὧν οὐκ ἠβουλόμεθα ὕστερον εἰς ἀνάγκην ἐλθωμεν ποιεῖν, καὶ κινδυνεύσωμεν περὶ τῶν ἐν αὐτῇ τῇ χώρᾳ.

(B) Φημὶ δὴ δεῖν ὑμᾶς ἅμα τοῖς μὲν Ὀλυνθίοις βοηθεῖν, (καὶ ὅπως τις λέγει κάλλιστα, καὶ τάχιστα οὕτως ἀρέσκει μοι,) πρὸς δὲ Θετταλοὺς πρεσβείαν πέμπειν, ἣ τοὺς μὲν διδάξει ταῦτα τοὺς δὲ παροξυνεῖ· καὶ γὰρ νῦν εἰσὶν ἐψηφισμένοι Παγασὰς ἀπαιτεῖν, καὶ περὶ Μαγνησίας λόγους ποιεῖσθαι. σκοπεῖσθε μέντοι τοῦτο ὦ ἄνδρες Ἀθηναῖοι, ὅπως μὴ λόγους ἐροῦσι μόνον οἱ παρ' ἡμῶν πρέσβεις, ἀλλὰ καὶ ἔργον τι δεικνύειν ἐξουσιν, ἐξεληλυθότων ἡμῶν ἀξίως τῆς πόλεως, καὶ ὄντων ἐπὶ τοῖς πράγμασιν· ὡς ἅπας μὲν λόγος, ἂν ἀπῇ τὰ πράγματα, μάταιόν τι φαίνεται καὶ κενόν, μάλιστα δὲ ὁ παρὰ τῆς ἡμετέρας πόλεως· ὅσῳ γὰρ ἑτοιμότατ' αὐτῷ δοκοῦμεν χρῆσθαι, τοσούτῳ μᾶλλον ἀπιστοῦσι παντες αὐτῷ. πολλὴν δὴ τὴν μετάστασιν καὶ μεγάλην δεικτέον τὴν μεταβολήν, εἰςφέροντας, ἐξιόντας, ἅπαντα ποιοῦντας ἑτοίμως, εἴπερ τις ὑμῖν προσέξει τὸν νοῦν. κἂν ταῦτα ἐθελήσητε, ὡς προσήκει κἀ δή, περαίνειν, οὐ μόνον, ὦ ἄνδρες Ἀθηναῖοι, τὰ συμμαχικὰ ἀσθενῶς καὶ ἀπίστως ἔχοντα φανήσεται Φιλίππῳ, ἀλλὰ καὶ τὰ τῆς οἰκείας ἀρχῆς καὶ δυνάμεως κακῶς ἔχοντα ἐξελεγχθήσεται.

(C) Πάντα δὴ ταῦτα δεῖ συνιδόντας ἅπαντας βοηθεῖν, καὶ ἀπωθεῖν ἐκεῖσε τὸν πόλεμον· τοὺς μὲν εὐπόρους, ἵν' ὑπὲρ τῶν πολλῶν, ὧν καλῶς ποιοῦντες ἔχουσι, μικρα ἀναλίσκοντες, τὰ λοιπὰ καρπῶνται ἀδεῶς· τοὺς δ' ἐν ἡλικίᾳ, ἵνα τὴν τοῦ πολεμεῖν ἐμπειρίαν ἐν τῇ Φιλίππου χώρᾳ κτησάμενοι, φοβεροὶ φύλακες τῆς οἰκείας ἀκεραίου γένωνται· τοὺς δὲ λέγοντας, ἵν' αἱ τῶν πεπολιτευμένων αὐτοῖς εὖθυναι ῥᾳδιαι γένωνται· ὡς ὁποῖ' ἀττ' ἂν ὑμᾶς περιστῇ τὰ πράγματα, οἱοῦτοι κριταὶ καὶ τῶν πεπραγμένων αὐτοῖς σεσθε. χρηστὰ εἴη παντὸς εἵνεκα.

2. Explain carefully the syntax of the following exts. :—(*a*) *σκοπεῖσθε εἰς τί ποτ' ἐλπὶς ταῦτα τελευτῆσαι.* (*b*) *πολλὰ καὶ χαλεπὰ ὧν οὐκ ἠβουλόμεθα εἰς ἀνάγκην ἐλθωμεν ποιεῖν.* (*c*) *σκοπεῖσθε ὅπως μὴ λόγους ἐροῦσι μόνον.* (*d*) *ἐξεληλυθότων ἡμῶν ἀξίως τῆς πόλεως καὶ ὄντων ἐπὶ τοῖς πράγμασιν.* (*e*) *σῳ γὰρ ἑποιμότατ' * * * πάντες αὐτ᾽* :—express this in Latin.

3. Write short explanatory notes on :—(1) *εὐθυναι ῥᾴδιαι.* (2) *ἐν ἡλικίᾳ.* (3) *εἰσφέροντας.* (4) *ἀνεχαίτισε.* (5) *πεφενάκικεν.* (6) *λειτουργίαι.* (7) *ὦ τᾶν.* (8) *τὴν μετάστασιν—τνμ εταβολήν.* (9) *ὀτείλεσὴστῇ,*

4. Parse the following words, noting any peculiarities :—*ἐνίοις, ἀσμενοι, ἠὐξήθη, σώφροσιν, φήσαι, πεπονθέναι, πεφηνέναι, ἀπολωλεκέναι, ὑπηργμένων, ἤτε ἀπηλλαγμένοι.*

5. Give the meaning and etymology of the following :—*ἐνίσις, ἐπιεικῶς, ἀναστάσεως, ἀντίρροπον, τόκοις, διχῇ, κομιδῇ, ἀκεραίου, φωρᾶται, ἄρα.*

6. Distinguish between :—*βούλομαι* and *ἐθέλω. ἐκπολεμέω* and *ἐκπολεμόω. παρῆσαν* and *παρῆσαν. γραφῇ* and *γράφῃ. κᾰ̓τα* and *κατά. καὶ εἰ* and *εἰ καί. ἔνι, ἐνί,* and *ἐνί. διάφορα* and *διαφορά. ταῦτα* and *ταὐτά. ὁ δεῖνα* and *τὰ δεινά.* Distinguish between ;—*οἱ σοφοὶ ἄνθρωποι, σοφοὶ οἱ ἄνθρωποι,* and *οἱ σοφοὶ τῶν ἀνθρόπων.* (Explain the use of the Genitive.) *ὁ οὐ πιστεύων* and *ὁ μὴ πιστεύων. οὐ μὴ ποιήσεις* and *οὐ μὴ ποιήσῃς.*

7. (*a*) Write down the *Gen. Sing.* and the *Dat. Plu.* of :—*ὄρνις, κύων, κέρας, σάλπιγξ.* (*b*) Decline *γέλως, χάρώς.* (*c*) Write down the Positive and Superlative of :—*ἀμείνων, θᾶττον, μᾶλλον, πρότερον.* (*d*) Accentuate *πολεμησαι* (in all its uses), *ἐπολεμει, πολεμει, ἐλθειν, βουλευειν, ἐβουλευετο.*

8. Give the dates of the accession and death of Philip ; the delivery of the Olynthiac Orations ; of the capture of Olynthus ; Chæroneia ; accession of Alexander. What was the end of Demosthenes ?

FIRST YEAR.

LATIN.—VIRGIL.—ÆNEID, BOOK VI.

TUESDAY, DECEMBER 12TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A)

Ibant obscuri sola sub nocte per umbram,
Perque domos Ditis vacuas et inania regna:
Quale per incertam lunam sub luce maligna
Est iter in silvis, ubi caelum condidit umbra
Iuppiter, et rebus nox abstulit atra colorem.
Vestibulum ante ipsum primisque in faucibus Orci
Luctus et ultrices posuere cubilia Curae;
Pallentesque habitant Morbi, tristisque Senectus,
Et Metus, et malesuada Fames, ac turpis Egestas,
Terribiles visu formae, Letumque, Labosque;
Tum consanguineus Leti Sopor, et mala mentis
Gaudia, mortiferumque adverso in limine Bellum,
Ferreique Eumenidum thalami, et Discordia demens,
Vipereum crinem vittis innexa cruentis.

(B)

Quam multa in silvis autumni frigore primo
Lapsa cadunt folia, aut ad terram gurgite ab alto
Quam multae glomerantur aves, ubi frigidus annus
Trans pontum fugat et terris inmittit apricis.
Stabant orantes primi transmittere cursum,
Tendebantque manus ripae ulterioris amore.
Navita sed tristis nunc hos nunc accipit illos,
Ast alios longe submotos arcet arena.
Aeneas miratus enim motusque tumultu
Dic, ait, o virgo, quid volt concursus ad amnem?
Quidve petunt animae? vel quo discrimine ripas
Hae linquunt, illae remis vada livida verrunt?

(C)

Nec puer Iliaca quisquam de gente Latinos
In tantum spe tollet avos, nec Romula quondam
Ullo se tantum tellus iactabit alumno.
Heu pietas, heu prisca fides, invictaque bello
Dextera! non illi se quisquam inpune tulisset
Obvius armato, seu cum pedes iret in hostem,
Seus pumantis equi foderet calcaribus armos.
Heu, miserande puer! si qua fata aspera rumpas,
Tu Marcellus eris. Manibus date lilia plenis
Purpureos spargam flores, animamque nepotis
His saltem adcumulem donis, et fungar inani
Munere.

2. How do you explain the following:—(1) quam sedem somnia *volgo* tenere ferunt. (2) Ancora *fundabat* navis. (3) major *videri*. (4) non *inferiora* secutus. (5) *si possit excussisse* deum. (6) fusus *humi*. (7) torva *tuentem animum*. (8) in tantum *spe* tollet.

3. Parse (giving the first Sing. Present, Perfect and Future Indicative, of each,) the following verbs:—fare, praeterlabere, fungar, cucurrit, prendimus, oraveris, decerpserit, texit, incubuere, lætere, perlegerent, sequere.

4. Give the etymology of the following, and the cognate forms of any in Greek or English:—brumali, armis, ambages, fulmen, juga, postuma, seclusum, oblivia, caminis, mœnia, lacerum, populata.

5. Write explanatory notes on the following allusions:—(1) Curibus parvis et paupere terra missus. (2) Fasces videre receptos. (3) Saevum securi Torquatum. (4) Aggeribus socer Alpinis descendens, gener adversis instructus Eois. (5) Tertia arma suspendet Quirino. (6) Fixerit aeripedem cervam licet. (7) Sibylla. (8) Threicius sacerdos.

6. Give the geographical position of:—Minoia regna; Massylum gentes; Syrtibus; Mæotia tellus; Caietae; Mycenas; Alba Longa; per Elidis urbem.

7. Write down the name and the scheme of the metre used by Virgil. Scan the first six verses of Ext. (A).

8. Name the cases of the words in Italics, with a translation of the ext., and state the grounds of your interpretation in each instance:—(*a*) *Praepetibus pennis* ausus se credere *caelo*. (*b*) Non indebita posco regna *meis fatis*. (*c*). Et pater ipse suo *superum* jam signat honore. (*d*) Inter saxa virum *spumosa* inmerserat unda. (*e*) Obloquitur *numeris* septem discrimina vocum. (*f*) Sortem *animi* miseratus iniquam. (*g*) Give the proper grammatical construction of the sentence "manibus date * * * munere", in ext. (C).

9. (*a*) Distinguish between:—mānent and mănent; nītens and nĭtens; lucīs and lucĭs; dūcis and dŭcis; refert and rĕfert; vēnĭmus and vĕnĭmus. (*b*) Decline *acer*, *vis*, *aliquis*, *ipse*. (*c*) Compare *similis*, *gravis*, *nequam*, *breve*. (*d*) By what cases are these words severally followed:—*miseret*, *pudet*, *refert*, *condemno*.

10. Translate into Latin:—(1) Pompey was the first Roman who subdued the Jews. (2) The tyrant Dionysius, expelled from Syracuse, taught boys at Corinth. (3) You and I did it. (4) I am afraid he will come. (5) I was afraid he would not come. (6) A crown of gold was given to the king.

SECOND YEAR.

LATIN.—HORACE.—EPISTLES, BOOK I.

TUESDAY, DECEMBER 12TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D

1. Translate:—

(A)

Trojani belli scriptorem, maxime Lolli,
Dum tu declamas Romae Praeneste relegi;
Qui quid sit pulchrum, quid turpe, quid utile, quid non,
Planius ac melius Chrysippo et Crantore dicit.
Cur ita crediderim nisi quid te detinet audi.
Fabula qua Paridis propter narratur amorem
Graecia Barbariae lento collisa duello
Stultorum regum et populorum continet aestus.
Antenor censet belli praecidere causam:
Quid Paris? Ut salvus regnet vivatque beatus
Cogi posse negat. Nestor componere lites
Inter Peliden festinat et inter Atriden;
Hunc amor, ira quidem communiter urit utrumque.
Quidquid delirant reges plectuntur Achivi.
Seditione, dolis, scelere atque libidine et ira
Iliacos intra muros peccatur et extra.

(B)

Quid tibi visa Chios, Bullati, notaque Lesbos,
Quid concinna Samos, quid Croesi regia Sardes,
Smyrna quid et Colophon? Majora minorave fama,
Cunctane prae Campo et Tiberino flumine sordent?
An venit in votum Attalicis ex urbibus una,
An Lebedum laudas odio maris atque viarum?
Scis Lebedus quid sit; Gabiis desertior atque
Fidenis vicus; tamen illic vivere vellem,
Oblitusque meorum obliviscendus et illis
Neptunum procul e terra spectare furentem.
Sed neque qui Capua Romam petit imbre lutoque
Adspersus volet in caupona vivere; nec qui
Frigus collegit furnos et balnea laudat
Ut fortunatam plene praestantia vitam.
Nec si te validus jactaverit Auster in alto,
Idcirco navem trans Aegaeum mare vendas.

(C)

Tu recte vivis si curas esse quod audis.
Jactamus jampridem omnis te Roma beatum;
Sed vereor ne cui de te plus quam tibi credas,
Neve putes alium sapiente bonoque beatum,

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Neu si te populus sanum recteque valentem
Dictitet occultam febrem sub tempus edendi
Dissimules, donec manibus tremor incidat unctis.
Stultorum incurata pudor malus ulcera celat.

2. Write a short account of Horace and his poetry, and give the main outlines of the chronology of his poems.

3. Explain carefullythe grammatical construction of the following :—(*a*) Non possis oculo quantum contendere Lynceus. (*b*) Mutat quadrata rotundis. (*c*) Poenas odio per vim festinat inulto. (*d*) Indigni fraternum rumpere fœdus. (*e*) Sollicitis animis onus eximit. (*f*) Excepto quod non simul esses cætera lætus.

4. Write short explanatory notes (grammatical) on the following, illustrating from the Greek where you can :—(*a*) Fruges *consumere* nati. (*b*) Reddes *dulce loqui*. (*c*) Scribe *tui gregis*. (*d*) Liber *mihi* non erit unquam. (*e*) Bella *tibi* pugnata dicat. (*f*) Regia *Sardes*. (*g*) Natus moriensque *fefellit*. (*h*) Cæsaris *genibus* minor. (*i*) Si curas esse quod *audis* (*j*) Domini *deduxit* febres.

5. Explain briefly the following allusions :—(1) Conducere publica-(2) Janus summus ab imo. (3) Alcinoi juventus. (4) Palatinus Apollo. (5) Qui Capua Romam petit. (By what road would he travel ?) (6) Cærite cera. (7) Sidonio ostro, Aquinatem fucum. (8) Vacunæ. (9) Indictis Latiris. (10) Pluribus umbris.

6. Janus summus * * *perdocet*. Dolor quod suaserit *et mens*. *Vulpecula* rimam repserat.—What other readings are given by the MSS. or Edd. of Horace ?

7. Show how the meaning of the following words differs, severally, as their quantity differs :—Edi, incidi, dicant, regere, utere, canis, mane, soles, pendere, oblitus, rege, levis.

8. (*a*) By what cases are the following words respectively followed ?—Tempero, consulo, nubo, irascor, memor, expers. (*b*) Decline the following nouns :—Pollice, focis, opis, fenore, porticibus, glomus.

9. (*a*) Give the different constructions, and the difference of meaning accordingly, which the following verbs have:—convenire, metuere, providere, and cavere. (*b*) Explain the use of the *Predicative* Dative, the Dativus *Comnodi*, and the Dativus *Ethicus*, and give examples.

10. Translate into Latin :—

Caius Marcius was a noble Roman, of the race of that worthy king Ancus Marcius ; his father died when he was a child, but his mother, whose name was Volumnia, performed to him the part both of father and of mother ; and Caius loved her exceedingly, and when he gained glory by his feats of arms, it was his greatest joy that his mother should hear his praises ; and when he was rewarded for his noble deeds, it was his greatest joy that his mother should see him receive his crown.

THIRD YEAR.

LATIN—JUVENAL.—SATIRES III. AND VIII.

THURSDAY, DECEMBER 14TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A)

His ego quem monui? tecum est mihi sermo, Rubelli
Plaute. Tumes alto Drusorum stemmate, tanquam
Feceris ipse aliquid, propter quod nobilis esses,
Ut te conciperet quæ sanguine fulget Iuli,
Non quæ ventoso conducta sub aggere texit.
"Vos humiles," inquis, "vulgi pars ultima nostri,
Quorum nemo queat patriam monstrare parentis:
Ast ego Cecropides!" Vivas et originis hujus
Gaudia longa feras: tamen ima plebe Quiritem
Facundum invenies; solet hic defendere causas
Nobilis indocti; veniet de plebe togata,
Qui juris nodos et legum ænigmata solvat.
Hic petit Euphraten juvenis domitique Batavi
Custodes aquilas, armisndusu:tstirau
Nil nisi Cecropides truncoque simillimus Hermæ.
Nullo quippe alio vincis discrimine, quam quod
Illi marmoreum caput est, tua vivit imago.

(B)

Ardet adhuc, et jam accurrit qui marmora donet,
Conferat impensas: hic nuda et candida signa,
Hic quid præclarum Euphranoris et Polycleti,
HæcAsianorum vetera ornamenta deorum,
Hic libros dabit et forulos mediamque Minervam,
Hic modium argenti: meliora et plura reponit
Persicus, orborum lautissimus et merito jam
Suspectus, tanquam ipse suas incenderit ædes.
Si potes avelli Circensibus, optima Soræ
Aut Fabrateriæ domus aut Frusinone paratur,
Quanti nunc tenebras unum conducis in annum.
Hortulus hic puteusque brevis nec reste movendus
In tenues plantas facili diffunditur haustu.
Vive bidentis amans et culti villicus horti,
Unde epulum possis centum dare Pythagoreis.
Est aliquid, quocumque loco, quocumque recessu
Unius sese dominum fecisse lacertæ.

(C)

Et quoniam cœpit Græcorum mentio, transi
Gymnasia atque audi facinus majoris abollæ.
Stoicus occidit Baream, delator amicum,

Discipulumque senex, ripa nutritus in illa,
Ad quam Gorgonei delapsa est pinna caballi.
Non est Romano cuiquam locus hic, ubi regnat
Protogenes aliquis vel Diphilus aut Hermarcus,
Qui gentis vitio nunquam partitur amicum,
Solus habet. Nam quum facilem stillavit in aurem
Exiguum de naturæ patriæque veneno,
Limine summoveor; perierunt tempora longi
Servitii. Nusquam minor est jactura clientis.

2. Explain the construction of:—(*a*) Longo sanguine censeri. (*b*) Humeros—humero—carentem. (*c*) Tamquam feceris ipse aliquid * * ut te conciperet quæ sanguine fulget Iuli. (*d*) Quota portio fæcis Achæi? (*e*) Omnia Romæ cum pretio. (*f*) Magnis opibus dormitur.

3. Write explanatory notes on the following allusions:—(1) *Verso pollice* occidunt. (2) Sumit *trechedipna*. (3) Fert *niceteria*. (4) Non fugiam *conchylia*? (5) Accipit *endromidem*. (6) Facinus *majoris abollæ*. (7) *Titanida pugnam*. (8) De *pulvino* surgat *equestri*. (9) Puellæ *sarcinulis* impar. (10) Perdere *naulum*.

4. Explain the following local references:—(1) Ventoso sub aggere. (2) Pomptina palus et Gallinaria pinus. (3) Ad Circum. (4) Suburræ. 5) Ad veteres arcus madidamque Capenam. (6) Ubi Dædalus exuit alas.

5. Explain the following historical references:—(1) Hospes numinis Idæi. (2) Qui servavit trepidam Minervam. (3) Stoicus occidit Baream (4) Inde Dolabella; hinc Antonius. (5) Phalaris. (6) Cecropides.

6. Discuss the meaning of:—(*a*) A facie jactare manus. (*b*) Claudit latus ingenuorum. (*c*) Cujus res legi non sufficit. (*d*) Opici mures. (*e*) Unius sese dominum fecisse lacertæ. (*f*) In qua prœcucha. (*g*) Proavorum atavos. (*h*) Jurat solam Eponam.

7. Give the exact meaning and derivation of the following words used by Juvenal:—cophinus, niceteria, aliptes, peculia, viduas, acersecomes, epiredia, stemmata, busta, schœnobates.

8. Discuss the following *var. lectt.* and give their meaning severally:—Quanto præstantius (*præsentius*) esset numen aquæ? Contentus illic veneto duroque cucullo (*cululło*). Quod nudum et frusta (*fustra*) rogantem nemo * * juvabit. Ne tu sic (*sis*) Creticus. Ut (*et*) te conciperet. Torvum (*robum*) juvencum. Veteris rimae contexit (*cum texit*) hiatum.

9. (*a*) Show the various ways of expressing in Latin:—(1) *He died four years after I saw him.* (2) *He came for the purpose of seeing the city.* (3) *We may live free from care.* (*b*) Also show how difference in quantity gives difference of meaning in the following, respectively:—perit, manus, securis severis, refert, vires. (*c*) Conjugate the *Imperfect Subjunct.* of abeo, fero nolo, prosum.

10. An account of Juvenal and his writings.

MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

EUCLID—ARITHMETIC.

THURSDAY, DECEMBER 14:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Similar triangles are to one another in the duplicate ratio of their homologous sides.

2. In any right-angled triangle any rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the other two sides.

3. If the sides of two triangles about each of their angles be proportional the triangles shall be equiangular and have equal angles opposite homologous sides.

4. Inscribe a regular pentagon in a circle.

5. If two chords cut one another within a circle, the rectangle under the segments of the one is equal to the rectangle under the segments of the other.

6. If a line be divided into any two parts, the square on the whole is equal to the sum of the squares of the parts, together with twice the rectangle under the parts.

7. If two triangles be equiangular, they can be so placed with one vertex common and two pairs of sides forming two straight lines that a circle will pass through the four extremities of the bases.

a. Hence show that the rectangles under the sides are equal, as proved by Bk. VI, Prop. IV and Prop. XVI usually.

8. On a given straight line construct a segment of a circle containing an angle equal to a given one.

9. What principal at simple interest at 16 per cent. will amount to $3786.80 in 11 years.

a. Prove your work by casting out the 9s, and explain this for addition.

10. Extract the square roots of $1\frac{25}{49}$, and of 456.

11. Extract the cube root of the last result in the previous question to 100ths.

12. A field, *a b c d*, has four sides, $ab = 22$ rods, $bc = 13$ rods, $cd = 12$ rods, $da = 7$ rods; ab is parallel to cd, and the perpendicular distance between them is 6.929 rods. Calculate the area of field; and also area of a piece cut off by a parallel to cd through a point on da, one rod from d.

13. Find value of

$$\tfrac{2}{3}\left(\tfrac{1}{3} + 2\tfrac{1}{2} - 8\tfrac{1}{6}\right) \div \left(\tfrac{3}{4} \text{ of } \tfrac{5}{6}\right)$$

14. Divide 1.356 by .03, and reduce the quotient to a vulgar fraction.

SECOND YEAR.

EUCLID—ALGEBRA—TRIGONOMETRY.

THURSDAY, DECEMBER 14TH:—MORNING, 9 TO 1.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Find a mean proportional between two given straight lines.

2. Equiangular parallelograms are to one another in the ratio compounded of the ratios of their sides.

3. Circumscribe a circle about a given triangle.

4. One circle cannot touch another at more points than one whether the contact be internal or external.

5. Reduce to its simplest form

$$\frac{x+y}{y} - \frac{2x}{x+y} + \frac{x^3 - x^2 y}{y^3 - x^2 y}$$

6. Solve the equations

(*a*) $$\frac{x+6}{4} - \frac{16-3x}{12} = \frac{25}{6}$$

(*b*) $$\frac{ax^2+bx+c}{px^2+qx+r} = \frac{ax+b}{px+q}$$

(*c*) $$\left\{\begin{array}{l} \frac{3y-1}{4} = \frac{6z}{5} - \frac{x}{2} + \frac{9}{5} \\ \frac{5x}{4} + \frac{4z}{3} = y + \frac{5}{6} \\ \frac{3x+1}{7} - \frac{z}{14} + \frac{1}{6} = \frac{2z}{21} + \frac{y}{3} \end{array}\right.$$

(*d*) $$x\sqrt{\frac{6}{x} - x} = \frac{1+x^2}{\sqrt{x}}$$

7. Simplify $a^{\frac{1}{3}} \times a^{-\frac{3}{4}} \times \sqrt[3]{a^4} \times a^{\frac{1}{12}} \times \sqrt[8]{\sqrt{a^3}} \times (a^{-\frac{7}{4}})^{\frac{7}{6}}$

8. Find a fraction such that if 1 be added to its numerator, it becomes $\frac{1}{3}$: but if one be added to its denominator it becomes $\frac{1}{4}$.

9. State and prove the properties of logarithms used in finding the products, quotients, roots and powers of numbers.

10. The last three terms of a proportion are 7.689, 3.456, .00255 find the first term by logarithms.

11 The area of a triangle is equal to

$$\sqrt{s\,(s-a)\,(s-b)\,(s-c)}$$

12. Prove $cos\,(A-B) = cos\,A\,cos\,B + sin\,A\,sin\,B$.

13. In an oblique angled triangle given

$a = 320$, $b = 800$ $B = 128° 4$; find C.

14. In any oblique angled triangle

$a + b : a - b :: tan\,\frac{1}{2}\,(A+B) : tan\,\frac{1}{2}\,(A-B)$

Point out the uses of this formula.

15. Victoria bridge has 25 spans, each 252 long, except the centre one, which is 340. From outer end of centre span a rock in the river snbtends with a mark on the wharf 22°, and the mark subtends with inner endof bridge 56°.35. From the mark the rock subtends with outer end of centre span 31°.30′; and the mark is chosen so that it is on a line perpendicular to bridge at inner end. Find distance of rcck from the two points of observation, as far as the mark from end of bridge?

16. The Notre Dame towers are 212 feet high.

(*a*) How far down the river could they be seen, if no object intervening broke the view?

(*b*) How much farther from the top of a mast 40 feet high?

(*c*) Prove your rule.

THIRD YEAR.

MECHANICS.

TUESDAY, DECEMBER 12TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Prove that if three parallel forces acting in one plane be in equilibrium the sum of their moments, with respect to any point in that plane, must be zero. State the theorem in a more general form.

a. On a uniform straight bar, weighing 5 lbs. and 5 ft. long, weights of 1, 2, 3, 4 lbs. are hung at the distances 1, 2, 3, 4 ft. respectively from the extremity. Find the distance from the centre of the bar, of the fulcrum on which the whole will rest.

2. Give that part of Duchayla's proof in which it is shown that the resultant of two forces meeting at a point, of which one is double the other, is in the direction of the diagonal of the parallelogram formed by these forces.

3. Find in magnitude and position the resultant of two parallel forces acting in opposite directions.

4. If a body be suspended from a fixed point, it will not be in equilibrium unless the line joining the point of suspension with the centre of gravity be vertical.

5. State and explain the principle on which the equilibrium of machines is founded.

6. Compare the efficiency of the first and second kind of Burtons, each having 10 movable pulleys.

7. From the highest point of a circle in a vertical plane chords are drawn; show that the time occupied by a body in running down any chord is constant.

8. If a body be compelled to move on a circle with a velocity of 300 yards per minute, the radius of the circle being 16 feet, calculate the centrifugal force.

9. Show that the force of the earth's attraction, uninfluenced by rotation is 289.4 times the centrifugal force at the equator, from the following data:

Earth's equatorial radius	= 20923596 feet
No. of seconds in a sidereal day	= 86164
g. (at equator)	= 32.088

10. Prove that if two bodies, W, W′, rotate round their common centre of gravity as centre, the centrifugal forces on them are equal.

11. If a clock lose two minutes a day in London where the length of the seconds pendulum is 39.139 inches, find how many turns we must give to the nut in order to screw up the bob so as to correct the error, the screw having 50 threads to the inch.

12. If a body fall from a position of rest along any curve show that the velocity at any moment depends on the vertical height through which it has fallen and is independent of the nature of the path.

THIRD AND FOURTH YEARS.

EXPERIMENTAL PHYSICS—ELECTRICITY.

TUESDAY, DECEMBER 12TH:—AFTERNOON, 2 TO 4

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A stick of sealing-wax is rubbed with catskin and presented to a pith-ball pendulum which is suspended by a silk thread; state the ensuing phenomena, and explain them fully according to the two-fluid theory.

2. Describe any two experiments showing that electricity is distributed on the surface only of bodies.

3. Describe the gold-leaf electroscope and mode of using it.

4. Describe Holtz's electrical machine, and state the theory as given in the lectures, explaining fully the mode of priming the armatures, and the action of the revolving plate, the conductors, and the armatures.

5. Explain the method by which the charge of a Leyden jar or battery is ascertained by means of Lane's electrometer.

6. Describe Thomson's electrometer.

7. Describe the mode of magnetising a needle of frictional electricity

8. Describe Wheatstone's method of determining the velocity of electricity.

FOURTH YEAR.

MECHANICS—HYDROSTATICS—OPTICS—ASTRONOMY.

TUESDAY, DECEMBER 12:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A body compelled to move on the circumference of a vertical circle whose radius is 100 feet falls down the circle from the extremity of a horizontal diameter, calculate its velocity after describing half a quadrant, if $g = 32.1908$, first proving your formula.

2. Explain fully the principle of the method for finding the value of g at different points of the Earth's surface.

3. What is the object of Atwood's Machine? Describe it in its most elementary form and explain the mode of application.

4. If the unit of force be defined as that force which, acting on one pound of matter for one second, generates a velocity of 1 foot per second, find by what weight it may be indicated.

5. What force will be required to work the handle of a windlass, the resistance to be overcome being 1156 lbs., the radius of the axle being 6 inches, and of the handle, 2 feet 8 inches?

6. Describe the Air-pump, and show that it can never make a perfect vacuum.

7. State the principle of the Bramah press, describe the difficulty in the practical application of it, and show how it was overcome.

a. If the ratio of the diameter of the pistons be $\frac{1}{20}$ and the force applied be $2\frac{1}{2}$ tons, calculate the lifting force produced.

8. Calculate the weight of 1,000 cubic feet of coal gas whose sp. gr. = 0.496, and temp. = 60°, and pressure = 30 inches, from the following datum, viz.,—the weight of 100 cubic inches of dry air at temp. 60° and pressure 30 inches is 31.01 grs.

9. Describe the Mercurial Barometer.

10. If a candle be placed in front of a vertical mirror, and the mirror turn round a vertical axis through an angle a, show that its image must urn through an angle $2a$.

11. A short-sighted person can read a book at the distance $5\frac{1}{2}$ inches, and wishes to read at the distance 10 inches, find the kind of spectacles he must use, and their focal length.

12. Define the *dispersion* produced by a prism, and state and explain the error which led Newton to believe that "the improvement of telescopes of given lengths by refractions is desperate."

13. Describe the method of finding the distance of Jupiter from the Sun.

14. Describe the principle of Halley's method of finding the distance of the Sun by a Transit of Venus.

15. If the mean diameter of the Sun as seen from the Earth be 1923,- and the mean diameter of the Earth as seen from the Sun be 17."9, calculate the ratio of the length of the Earth's shadow to the radius of the Earth, explaining your method.

16. State Kepler's First Law, and describe a method of verification.

ENGLISH AND RHETORIC.

FIRST YEAR.

ENGLISH GRAMMAR.

FRIDAY, DECEMBER 15TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give definitions of the following grammatical terms:—Sentence, phrase, subject, predicate, object, adverbial phrase.

2. Explain the two different significations in which the relative "who" is used.

3. Give the classes of nouns, with an example of each class.

4. Mention the three distinct modes of reference of the pronoun "it."

5. Mention the principal adverbial substitutes for the demonstrative adjectives.

6. Give examples of transitive verbs as active, passive and reflective, of transitive verbs used intransitively and of intransitives with a preposition used transitively.

7. Give the original import and the derivative significations of the preposition "of."

8. Explain the grammatical terms co-ordination and subordination. Illustrate by examples.

9. How do you account for the practice of assigning genders, masculine or feminine, to inanimate objects?

10. Arrange the tenses of the verb in tabular form.

11. Mention the different parts of speech or phrases that the enlarged subject or object of a sentence may consist of.

12. When the nominative is a relative pronoun how is the number of the verb determined?

13. Give the substance of what is said in regard to the Anglo-Saxon element of English.

14. Give the dates, with characteristic notices, of the different periods when the classical element was introduced.

15. Give a grammatical analysis, with notation, of the following passage:—

"He scarce had finished, when such murmur filled"
"The assembly, as when hollow rocks retain"
"The sound of blustering winds which all night long"
"Had roused the sea, that with hoarse cadence lulls"
"Seafaring men o'erwatched, whose bark by chance,"
"Or pinnace, anchors in a craggy bay"
"After the tempest."

THIRD YEAR.

RHETORIC (WHATELY'S RHETORIC, CHAPS. I., II, III.)

FRIDAY, DECEMBER 15TH :—MORNING, 9 TO 12.

Examiner,..... ..... VEN. ARCHDEACON LEACH, D.C.L.

1. Give the substance of the critical remarks on the ancient systems of Rhetoric, with some account of the Rhetorical works of Aristotle and Quintilian.

2. Describe the plan of Whately's Treatise on the subject.

3. How do you account for the remarkable assiduity with which the ancients devoted themselves to the study of Rhetoric?

4. Reply to the questions:—1. Is oratorical skill, on the whole, a public benefit or evil? 2. Is any artificial system of rules conducive to the attainment of that skill?

5. Explain the distinction made between instruction and conviction in the narrower sense.

6. State and explain the three preliminary inquiries in regard to propositions?

7. Explain the following divisions of arguments: 1. Regular and irregular. 2. Necessary or demonstrative and moral or probable. 3. Direct and indirect.

8. Give Whately's definition of the argument à priori.

9. What is given as the only decisive test by which the à priori class of arguments is distinguished from the other class? And how is this second class divided?

10. Write out what you remember on the subject of testimony?

11. How does it happen that the fallacy of composition so frequently misleads?

12. Explain the argument from progressive approach.

13. What is the difference between arguments from example and from induction?

14. Give the substance of what is said on presumption and burden of proof.

15. State the two modes of Refutation.

FOURTH YEAR.

ENGLISH LITERATURE.

FRIDAY, DECEMBER 15TH:—MORNING, 9 TO 12.

Examiner,..... .....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the uses of the history of a nation's literature as compared with history in its other forms.

2. Enumerate the conditions that are favorable to the growth of literature.

3. What are the circumstances or conditions that modify or give a peculiar chaacter to the literary productions of a people?

4. Mentionr the preliminary inquiry to be made in estimating the relative merits of literary productions.

5. Enumerate, with short explanatory remarks, the rules of literary-criticism as given in the lectures.

6. When does the authentic history of England begin, and in what light are the narratives of the older historians relating to times and events antecedent to be regarded?

7. Mention the four main points in reference to the beneficial effects of the Roman occupation of Britain, as given by Sir Edward Creasy.

8. Give an outline of the history of the Celtic population of Britain, and mention the principal relics of Celtic literature that survive.

9. What are the historical facts that prove a connection, in early times, between Brittany in France and the British people?

10. Give a short account of the life and adventures of King Arthur.

11. Give some account of the monastic institutions of the dark ages.

12. Mention the principal Latin writers of the Anglo-Saxon period, wit notices of their respective productions.

MENTAL AND MORAL PHILOSOPHY.

SECOND YEAR.

ELEMENTARY PSYCHOLOGY.

MONDAY, DECEMBER 18TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Mention the various terms used for *Mind*.

2. What is the characteristic by which mental phenomena are distinguished?

3. What are the sources from which the Elements of Cognition are derived?

4. Describe (*a*) the organ of Taste, (*b*) the bodies which act on it, (*c*) its sensations, both pure and mixed.

5. Explain the distinction between the different sensations of Hearing.

6. Describe the experiments by which the comparative acuteness of different parts of the organ of Touch was determined.

7. Mention some other sensations connected with the skin besides those of Touch.

8. (*a*) What is the most important of the General Senses, in respect of the knowledge it gives? (*b*) Describe its sensations.

9. (*a*) Distinguish Presentation and Representation. (*b*) What calls up a Representation? (*c*) What is the act of calling up a Representation called?

10. Distinguish the Primary and Secondary Laws of Suggestion.

11. State and illustrate the Law of Uniform Association.

12. How do you explain the fact that, when two dissimilar images of an object are presented on the retinæ, we attend, not to the dissimilar images, but to the solidity, of the object?

13. Give a detailed exposition of the fact that Association and Comparison are involved even in the simplest perception.

14. Distinguish the Empirical and the Intuitional Schools.

15. Mention the various terms used to describe Intuitions.

THIRD YEAR.

MORAL PHILOSOPHY.

MONDAY, DECEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Explain the origin of the name, Moral Philosophy. (*b*) Describe the subject of the science.

2. Discuss the question, whether the Emotions are, like the Sensations, connected with bodily organs, and capable of being classified with reference to that connection.

3. (*a*) Explain Mr. Herbert Spencer's theory on the Origin of the Emotions. (*b*) How far does it account for the phenomena?

4. Illustrate and explain the fact that certain Feelings, which are naturally painful, afford pleasure by their indulgence.

5. (*a*) Explain the characteristics of Feelings, both on their *sensible* and on their *intellectual* side. (*b*) Explain the relation of these characteristics to the *motive power* of Feelings.

6. Explain how the Appetencies grow from the Feelings.

7. Explain the difference between Natural Affections and General Affections like those of Friendship.

8. (*a*) State Hobbes' theory of the Supreme Moral Law. (*b*) Show that it is incompatible with the essential characteristic of the Moral Consciousness.

9. Sketch the Empirical theory on the origin of our consciousness of Moral Obligation.

10. Sketch the theory which deduces that consciousness from the nature of Practical Reason.

11. (*a*). How does the consciousness of Merit and Demerit show itself among uncultivated minds? (*b*). In what sense may every virtuous act be said to be rewarded, every vicious act punished, at once?

12. Discuss the question, how far an action can be said to be good which does not conform to the highest standard of goodness.

13. State, in general terms, the antagonistic doctrines of Determinism (or Necessitarianism) and Libertarianism.

14. State the explanations of Moral Responsibility by Determinists and Libertarians respectively.

FOURTH YEAR.

MENTAL PHILOSOPHY.

MONDAY, DECEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish the two classes of Sensations, and mention the most important under each class.

2. (*a*) Upon what does the intellectual rank of a sense depend? (*b*) Sketch, in view of this, the rank of the different senses.

3. Describe the characteristics of Taste in man as contrasted with the mere animal, and in civilized man as contrasted with the savage.

4. Explain those perceptions of Hearing which involve the notion of space.

5. Mention the facts adduced to prove that we cannot perceive cubical extension by sight alone.

6. Mention the data on which the visual perception of cubical extension is based.

7. Why are objects not seen inverted, though an inverted image of them is produced on the retina?

8. Explain, on psychological grounds, the illusion referred to in the following passage:— "———she

Stared at her towers that, *larger than themselves*
In their own darkness, thronged into the moon."

9. What are (*a*) the sensations of the Muscular Sense, (*b*) the perceptions founded on these, (*c*) the properties of matter thus made known?

10. Explain the literal meaning and the present use of the terms *a priori* and *a posteriori*, as applied to cognitions.

11. Mention and define some of the other terms by which the same distinction of cognitions is expressed.

12. Show the fundamental importance of the question regarding the origin of Self-consciousness in the controversy between Empiricists and Intuitionists.

13. State the Empirical theory on this question, as held by Mill, Bain and Spencer.

14. State the Empirical theory on the origin of the notion of Space.

MODERN LANGUAGES AND HEBREW.

FIRST YEAR.

FRENCH.

THURSDAY, DECEMBER 21ST:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. What are the seven orthographical signs used in French? Give an example of each.

2. What is meant by *contraction of the article?* When does it take place? Give three examples.

3. Translate into French: The generals have gray horses, cows, birds and cloaks. Give the rules to form the plural of each of those nouns.

4. Write in French the singular and plural of *ring*, *owl*, *rudder*, *eye*, *hole*, *nail*, *pebble*, *work*, *halter*, and *bolt*.

5. What are the adjectives which require the doubling of the last consonnant before adding *e* to form the feminine? Give four examples.

6. Write in French both genders of: *an accuser*, *a defendant*, *a sinner*, *a school-master*, *infirm dry*, *twin*, *malignant*, *white*, *deaf* and *careful*.

7. Translate into French: We have about eleven thousand and eighty books in our library. To-day is the twentieth of December, eighteen hundred and seventy-six. Explain how to write those numbers. Remark the idiomatical differences between the English and the French in the use of numbers.

8. How do you form the comparatives of inferiority and equality in French? Give two examples of each.

9. Explain when *this* is translated by *ce*, *cet*, *cette* and when by *celui-ci* and *ceci?* Illustrate your answer by examples.

10. What are the three different ways to write *quelque?* State when they are to be used. Give examples.

11. Translate into French:—There were all kinds of furniture in that house: arm-chairs, stools, looking-glasses, desks, paintings, engravings, shovels, tongs, pokers, fenders, pillows, towels, feather-brooms, decanters, &c., &c.

12. Write in full the *Imperfect Indicative*, *Preterite Definite*, and *Preterite Anterior* of *être*, *donnerai-je? ne pas se promener*, and *ne me flatté-je pas?* in the forms given.

13. Translate into French: The city of Rome was several times sacked.

Your conduct will be approved by wise and enlightened people. Will they not lose themselves in the wood? Have they not risen too late this morning? I would not expose myself so rashly. Did they not clear up his doubts? Never yield to the violence of thy passions. The thermometer has fallen four degrees since yesterday. You were collecting the taxes. That we might have fathomed that mystery.

14. Translate into English:—

LES FRELONS ET LES MOUCHES A MIEL.

A l'œuvre on connaît l'artisan.
Quelques rayons de miel sans maître se trouvèrent;
Des frelons les réclamèrent
Des abeilles s'opposant
Devant certaine guêpe on traduisit la cause.
Il était mal aisé de décider la chose;
Les témoins déposaient qu'autour de ces rayons
Des animaux ailés, bourdonnants, un peu longs,
De couleur fort tannée, et tels que les abeilles,
Avaient longtemps paru. Mais quoi! dans les frelons
Ces enseignes étaient pareilles.

LA FONTAINE.

SECOND YEAR.

FRENCH.

THURSDAY, DECEMBER 21ST:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Who was Andromaque? How did she come in the house of Pyrrhus? Who was Pyrrhus? By what acts was Pyrrhus known to Andromaque? What is the *nœud* of the Tragedie *Andromaque?* What is the *dénouement?* Who had written on that subject before Racine?

2. Translate into English:

Moi, je l'excuserais! Ah! vos bontés, madame,
Ont gravé trop avant ses crimes dans mon âme.
Vengeons-nous, j'y consens, mais par d'autres chemins;
Soyons ses ennemis, et non ses assassins;
Faisons de sa ruine une juste conquête!
Quoi pour réponse aux Grecs porterai-je sa tête?
Et n'ai-je pris sur moi le soin de tout l'Etat
Que pour m'en acquitter par un assassinat?
Souffrez, au nom des dieux! que la Grèce s'explique!
Et qu'il meure chargé de la haine publique.....
Souvenez-vous qu'il règne, et qu'un front couronné.....

3. Who speaks in the above extract? To whom? And about whom? Relate briefly the circumstance. Why have the two personal pronouns *moi, je*, of the first verse, different forms?

4. Translate into English: C'est trop essuyer de refus. Soulevez vos amis. Cet aveu dépouillé d'artifice. La perfidie a de quoi vous tenter. Tou cœur ne souffre qu'à regret qu'une autre t'entretienne. Gardez de négliger une amante en fureur qui cherche à se venger. Son esprit combattu de mille remords croit tantôt son amour, et tantôt sa vertu.

5. State five different cases in which the article is not used in French before nouns. Give examples.

6. When do proper nouns take the mark of the plura? Give two examples.

7. State the rules to translate in French adjective dimensions. Give three examples.

8. Where do you place the pronouns governed by the verbs: 1*st*. When they are of different persons: 2*nd* When they are of the same person? Give three examples.

9. When do you write the verb *être* in the plural after *ce?* Give three examples.

10. When two subjects singular are united by *ou*, how the verb to be written? Answer the same question for the word *ni*. Give the exceptions.

11. When do you use the *Imperfect* and *Pluperfect* of the *Subjunctive Mood?* Give four examples.

12. State the rules to write the past participle of reflective verbs and of particles followed by infinitives. Translate as examples the following phrases: My brothers have spoken to each other. Here are the letters they have written to one another. The lady I heard reading; and, the poetry I heard read.

13. Translate into French:—

Liberality consists less in giving much than in giving seasonably. You must have a man who loves nothing but truth and you, and who will speak the truth in spite of you. Do you think I might speak to him were I to go now? I doubt whether my brother would have succeeded had it not been for your assistance. You must have had a great deal of patience. Amenophis conceived the design of making his son a conqueror. He set about to after the manner of the Egyptians, that is, with great ideas. All the children who were born on the same day as Sesostris were brought to court, by the order of the king; he had them educated as his own children, and with the same care as Sesostris.

THIRD YEAR.

THURSDAY, DECEMBER 21ST :—MORNING, 9 TO 12.

FRENCH.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Translate into English :—

Je viens de fermer ma fenêtre ; j'ai ranimé mon feu. Puisque c'est fête pour tout le monde, je veux que ce le soit aussi pour moi. J'allume une petite lampe sur laquelle, aux grands jours, je prépare une tasse de café que le fils de ma portière a rapporté du Levant, et je cherche dans ma bibliothèque, un de mes auteurs favoris. Voici d'abord l'amusant curé de Meudon ; mais ses personnages parlent trop souvent le langage des halles ; Voltaire ; mais en raillant toujours les hommes, il les décourage. Molière ; mais il vous empêche de rire à force de vous faire penser. Le Sage !... arrêtons-nous à lui. Profond plutôt que grave, il prêche la vertu en faisant rire des vices ; si l'amertume est parfois dans l'inspiration, elle s'enveloppe toujours de gaîté; il voit les misères du monde sans le mépriser et connaît ses lâchetés sans le haïr. Appelons ici tous les héros de son œuvre : Gil Blas, Fabrice, Sangrado, l'archevêque de Grenade, le duc de Lerme Aurore, Scipion ! Plaisantes ou gracieuses images, surgissez, devant mes yeux, peuplez ma solitude, transportez-y, pour mon amusement, ce carnaval du monde dont vous êtes les masques brillants.

E. SOUVESTRE, *Le philosophe sous les toits.*

2. When did Boileau live ? By what kind of writings has he rendered himself famous ? What rank does he occupy in French Literature ? Name and characterize some of his principal works.

3. Give a short sketch of Bossuet's life and works.

4. Translate into English :—

Je songe à celle que le temps vient d'envelopper dans son linceul. Je sens mon âme embrumée comme l'horizon. Je jette là mon soufflet avec dépit. Il me reste un croûton durci que je brise à force de poignets, et que je grignotte nonchalamment comme un homme bien au-dessus des vanités du monde et des pains mollets. Notre humeur ressemble aux lunettes de spectacle qui, selon le bout, montrent les objects moindres ou agrandis.

5. Translate into English: *En passer par. Etre aux prises. A la dérobée. Faire cas de. Rire au nez.* And in French : *To come to the point. He advances within a gun shot. The sun strikes in my eyes. The question is. He has just come in.*

6. State the five rules to write the plural of compound substantives in French. Gives five examples and some exceptions.

7. State the rules to express the adjectives of dimensions in French. Give three examples.

8. Translate into French :—

The room and the closet are opened, bu the window and the drawer are shut. The demi-gods of the ancients were only men who had distinguished themselves by extraordinary vabur or virtue. The highest mountains are the reservoirs from which issue the largest rivers. Although the Chinese boast of being the most ancient nation they are far from being the most enlightened. Your uncles and your brother take charge of the enterprise ; they find the money, and he will manage the work.

JUNIOR CLASS.

GERMAN.

THURSDAY, DECEMBER 21ST :—AFTERNOON, 2 TO 5.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English :—

„Jupiter und Apollo."

Jupiter und Apollo stritten, welcher von ihnen der beste Bogenschütze sei. „Laß uns die Probe machen!" sagte Apollo. Er spannte seinen Bogen und schoß so mitten in das bemerkte Ziel, daß Jupiter keine Möglichkeit sah, ihn zu übertreffen.

„Ich sehe," sprach er, „daß du wirklich sehr wohl schießest. Ich werde Mühe haben, es besser zu machen. Doch will ich es ein andermal versuchen."

Lessing.

Der Araber in der Wüste.

Ein Araber hatte sich in der Wüste verirrt und war in Gefahr, vor Hunger und Durst zu sterben. Nach langem Umherirren fand er eine von den Cisternen oder Wassergruben, aus welchen die Pilger ihre Kameele tränken, und einen kleinen, ledernen Sack, der auf dem Sande lag. „Gott sei gelobt!" sprach er, als er ihn aufhob und befühlte; „das sind gewiß Datteln oder Nüsse; wie will ich mich an ihnen erquicken und laben!" In dieser süßen Hoffnung öffnete er schnell den Sack, sah, was er enthielt, und rief dann ganz traurig aus: „Ach, es sind nur Perlen!"

Schubart.

2. Give the meaning and Nominative Pural of Vater, Tag, Nadel, Blatt, Fingerhut, Vetter, Bank, Nation, Handuch, Knopf, Vogel, Knabe ;— and the gender and Nominative Singular of Augenschirme, Nächte, Häuserz Obstbäume, Ströme, Mädchen, Familienbilder, Kreuze, Leuchter.

3. (*a.*) Give the meaning and derivation of Bäuerin; Löwin, Lehrer Rätherinn, Nachbarin, Füchſinn, ſtählern, gläſern, eiſern, hölzern.—(*b*) Form diminutives from Blume, Garten, Tochter, Schiff, Brod, Kirche Band, Kaſten, Korb.

4. Give the Nominatives and Accusatives, Sing. and Plural, of:—the oldest man; my young niece; that diamond ring; a fertile (fruchtbar) country; (pl. fertile countries).

5. State those adjectives which form their Comparative and Superlative in an *irregular* manner. *b.* Compare ſchwarz, arm, theuer, weiſe, klug.

6. Write down in letters the cardinal numbers 17, 32, 91, 101, 1368, and the ordinals from *the tenth* to *the twenty-fourth.*

7. Explain the difference in meaning between nur (only) and erſt (only); erſter (first) and zuerſt (first); aber and ſondern; Zeit (time) and Mal (timə); können (to know), wiſſen (to know) and kennen (to know); fragen (to ask) and fordern (to ask); Leute (people) and Volk (people); Obſt (fruit) and Frucht (fruit).

8. Give the Present Infinitives of kann, geleſen, bin, geritten, gebunden, darf, geſehen, gegeben, mag, gearbeitet. (*b*) Give the 1st and 3rd Sing. and the 1st Plural, Present Indicative, of the following Past Participles:—gekommen, getadelt, verkauft, gebracht, gefunden, gewußt.

9. Translate into German:—

New works are not always so good as old *ones*. One good friend is better than many faithless friends. December and January are usually the coldest months. What dresses have you bought? There are three dozens of plates. This linen costs half a florin a yard. We like to read useful books. They will travel for a month next summer. His words are true (wahr). That is his son. Be polite to (gegen) every one. I do not hear what they are saying. Which is the right road, to the left or to the right? Where do those merchants live? You may go out without me to-day; I must remain at home to write some letters.

SENIOR CLASS.

GERMAN.

THURSDAY, DECEMBER 21ST:—AFTERNOON, 2 TO 5.

Examiner, ...C. F. A. MARKGRAF, M.A.

I. Translate into German:—

The famous General Derflinger, who lived in the 17th century, was the son of a countryman, and had learned the trade of a tailor (Schneiderhandwerk, n.). On a journey which he *took* (made), the boatman refused to take (fahren) him *across* (over) the Elbe, because he could not pay the money for the passage (Fahrgeld, n.); then (da) Derfflinger *in* (out of) anger and despair threw his bundle into the river and enlisted. First, he became a dragoon under General von Thurn, then he served under Gustavus Adolphus, and after the king's death under his (deſſen) generals. During the thirty years' war he *was made* (became) a colonel, and after the Westphalian peace he entered (treten....in) the service (s) of the Elector Frederick William of Brandenburg, where he soon rose to *be a* (the) general.

II. Translate into English:—

(A) Fragment from „Der Reiter und der Bodenſee," by Schwab.

Fort geht's wie auf Sammt auf dem weichen Schnee,
Wann rauſcht das Waſſer, wann glänzt der See?
Da bricht der Abend, der frühe, herein;
Von Lichtern blinket ein ferner Schein.
Es hebt aus dem Nebel ſich Baum an Baum
Und Hügel ſchließen den weiten Raum.
Er ſpürt auf dem Boden Stein und Dorn,
Dem Roſſe gibt er den ſcharfen Sporn.
Und Hunde bellen empor am Pferd,
Und es winkt im Dorf ihm der warme Herd.
„Willkommen am Fenſter, Mägdelein,
An den See, an den See, wie weit mag's ſein?"
Die Maid, ſie ſtaunet den Reiter an:
„Der See liegt hinter dir und der Kahn.

Und deckt' ihn die Rinde von Eis nicht zu,
Ich ſpräch, aus dem Nachen ſtiegeſt du."
Der Fremde ſchaudert, er athmet ſchwer:
„Dort hinten die Ebne, die ritt ich her!"
Da recket die Magd die Arm' in die Höh:
„Herr Gott, ſo ritteſt du über den See!"

(B) Wüthend kam ein Orkan am Gebirg'her!
Die Esche, die Tann' und Eiche brach,
Und mit Felsen stürzte der Ahorn
Vom bebenden Haupt des Gebirgs.
Ruhig schlummert' am Bache der Mai ein,
Ließ rasen den lauten Donnersturm!
Lauscht' und schlief, beweht von der Blüthe,
Und wachte mit Hesperus auf.
Itzo fühlst du noch nichts von dem Elend,
Wie Grazien lacht das Leben dir.
Auf und waffne dich mit der Weisheit!
Denn, Jüngling, die Blume verblüht!

Klopstock.

III. 1. State fully the rules relating to the declension of Proper Names of *persons*, *countries* and *places*.

2. Mention six adjective-nouns in German, which are *pure nouns* in English.

3. (*a*) How may adjectives be formed from adverbs of *time* and *place*? (*b*) What adjectives are *indeclinable*? (*c*.) What adjectives *only* are written with a capital initial in German? Illustrate *a*, *b*, *c* by short examples.

4. What are *proper* and *improper* reflective verbs? Instance one of each kind, and give all persons of the Present and Perfect Indicative of each verb.

5. (*a*) Give the 1st Sing. and 2nd Plural of the Imperfect and Pluperfect Subjunctive, and the Imperative (all persons) of wissen, laufen, treten, widersprechen, überfahren, werden. (*b*) Conjugate abhalten, giving the 3rd Singular of all moods and tenses of the *Passive* voice.

6. When may the Imperfect Subjunctive be used in German? Explain fully.

7. When may the verb stand immediately after its subject in a *dependent* clause? Give one or two examples.

8. Translate:—He called me his deliverer.—I longed to see them.—The lady's hands trembled.—We have succeeded in that affair.—They are in want of your assistance.—Beware of him.—Endeavor to make up for it.—I say it on your account.—I was advised to remain within the boundaries of the empire.

IV. Literature.

1. In what way did Charlemagne deserve well of our Literature? Mention some of the learned men of his Court. Name the oldest monument of German rhyme, dating from this period.

2. Give an account of the leading incidents of the '*Nibelungenlied*.' What date may be assigned for the composition of this poem? Who is supposed to be the author of it? Write down a scale of the metre.

3. Give a brief history of the principal German dialects from the earliest times to the Reformation, and show their relation to the literary language established by Luther.

JUNIOR CLASS.

HEBREW.

FRIDAY, DECEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner, ...ARCHIBALD DUFF, M.A.

1. Give a brief sketch of the place of Hebrew in the family of languages to which it belongs.

2. Write accurately with English letters the Hebrew of Genesis ch. I, vs. 1 to 6, and 20 to 23; ch. II. vs. 4 to 6, and 15 to 17, giving a separate list of the letters by which you express the Hebrew vowel sounds occurring in these passages.

3. Describe the uses of Daghesh and Sheva, and point out the consonants which suffer aspiration, giving illustrations by words from the text.

4. Give all the personal pronouns, nom. case, with careful pointings and meanings.

5. Describe the construction of each of the chief forms of the verb, 3rd Sing. Perf.

6. Write out Perfects of Kal of קטל; Piel of שלח; Hiphil of ברל; Niphal of כתב with meanings.

7. Write Imperfects of Kal of ב גר; Piel of קטל; Hiphil of בהל; Niphal of בחר with meanings.

8. Write Hebrew of following:—You are killing. I have written. They are dividing. He will choose. We did deceive. Kill thou. The act of writing. Continue ye terrifying. He is. He was. Be ye. He causes to be.

9. Parse and write English of following:—

זָקְטִיל: נְקְטַלְתֶּם: קְפַל: הִתְקַפְּלָה: אֶעֱמִיד: נֶעֱמַדְתֶּם: עָמְרוּ: תַּקְטִילוּ: לִגְחִי: בָּצָאתָ: הַעֲבַדְנָה:

Reading, Viva voce.

SENIOR CLASS.

HEBREW.

PSALMS I. TO IV.—GRAMMAR.

FRIDAY, DECEMBER 15TH:—AFTERNOON, 2 TO 5.

Examiner,.....ARCHIBALD DUFF, M.A.

1. Translate Pss. I. and III. closely literally.

2. Write in full Perf. Kal. of רגשׁ, Perf. Piel of ספר, Impf. Hiph. of אמר, Impf. Niph. of נתן.

2. Write out Perf. Kal of שלח with the suffixes accusative of 1st Person Sing. and Plur.

4. Write careful notes on (Ps. I.) אישׁ; עֲצַת; מושׁב; עַל; יוֹעֵץ רְשָׁעִים; (Ps. II) אַשְׁרֵי; מִסְכָּנוּ; מוֹסְרוֹתֵימוֹ.

5. Analyze thoroughly Ps. II., vs. 5, 8, 10.

6. Write out הַר־קָדֶשׁ (sing.) with all the possessive suffixes, sing. and plur.

7. Point out the more general classification of nouns as related to the stem-words, with illustrations.

8. Give a vocabulary of Ps. IV.

9. Translate into Hebrew:—I gave instruction to the mockers. Thou gavest me a decree concerning Thine anointed one. But they laugh at the time of my instruction. The kings of the earth who take council together know that Thou sittest in Thy holy hill. Thou shalt terrify them. Now shall the judges of the earth fall down before Thee. Thou shalt cause them to perish in the way with Thine iron sceptre.

10. Translate into English:—

אלוהים מעולם עד עולם: רוח האדם מאלוהים: אתה אלוהים צדיק ומלך גדול: אין חכמה לרע: משה ויהושה גבורים היו: ליהוה הלילה ניוס: מיהוה היה הישועה בצרה.

CHEMISTRY AND NATURAL SCIENCES.

FIRST YEAR ARTS, AND APPLIED SCIENCE.

ELEMENTARY CHEMISTRY.

WEDNESDAY, DECEMBER 20TH :—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., Ph. D.

1. What are the different processes given in the text-book by which substances may be obtained in a crystalline form? Describe the Regular and Rhombohedral Systems of crystallization.

2. Convert 80° Fahrenheit into degrees on the Centigrade and Reaumur scales.

3. Give the formulæ for the following substances :—Sulphuric Acid, Calcic Nitrate, Laughing Gas, Marsh Gas, and Cyanogen.

4. What volume of Oxygen can be obtained from 500 grammes of Potassic Chlorate, supposing the barometer to stand at 780 mm. and the thermometer at 14° (C.)

5. Describe the apparatus employed by Dumas & Boussingault for the analysis of air.

6. What are the properties of the gas produced by heating Sal-Ammoniac and quicklime together?

7. How is Ethylene prepared, and what are its properties? To what series of Hydrocarbons does it belong?

8. What are the principal constituents of Coal Gas after purification? What materials are used as purifiers, and what are the respective advan? tages or disadvantages attending their employment.

9. Describe the Davy Lamp, and any experiments illustrating the principle upon which its safety depends.

10. Explain the following equations :—

$$KCN + H_2 SO_4 = HCN + KHSO_4.$$

$$4\,C \times Fe_3\,O_4 = Fe + 4CO.$$

SECOND YEAR.

ELEMENTARY BOTANY.

WEDNESDAY, DECEMBER 20TH :—MORNING, 9 TO 12.

Examiner,..... J. W. DAWSON, LL.D., F.R.S.

1. Name the principal substances found in the cell-sap of plants, and describe one of them, stating its uses.

2. Describe the structures and substances indicated by the terms—Protoplasm, Prosenchyma, Lignin.

3. Explain the character and arrangement of the tissues in Exogenous in comparison with Endogenous stems.

4. Explain fully the anatomy of the Leaf, and the uses of its parts.

5. Explain the laws of Phyllotaxis.

6. Describe the structures and functions of the Root.

7. Explain the sources of the Carbon and Nitrogen found in plants.

8. State the modes of describing and arranging leaves, according to venation and characters of margin.

9. Describe shortly the parts and structures denoted by the following terms :—

(*a*) Primordial utricle
(*b*) Dotted Duct,
(*c*) Phyllodium,
(*d*) Cambium,
(*e*) Laticiferous vessel,
(*f*) Rhizoma.

10. Give examples of Phænogams, Cryptogams, Exogens and Endogens, properly arranged.

11. Describe any vegetable tissue as seen by you under the microscopic.

THIRD YEAR, AND MIDDLE YEAR OF APPLIED SCIENCE.

ELEMENTARY ZOOLOGY.

WEDNESDAY, DECEMBER 20TH :—AFTERNOON, 2 TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Explain the current theories of Cells and Bioplasmic matter.

2. Describe the Muscular Tissue, and its modifications in the lower animals.

3. State the general arrangement of the Nervous System in the *Vertebrata* and its modifications in the *Articulata*.

4. Describe the secretions essential to digestion, and the organs which produce them.

5. What are the Primary subdivisions of the Animal Kingdom. Give the characters of one of them.

6. Describe minutely any animal tissue as seen by you under the microscope.

7. Characterize the *Rhizopoda*, and give the subdivisions, with examples.

8. State the division of *Porifera* into Families, and the different characters of their skeletons.

9. Describe fully *Cyanea* or *Actinia*.

10. What are the distinctive characters of *Rugosa* and *Tabulata*, and their affinities with modern corals.

11. Explain any two of the following terms :—(a) cilia, (b) homology, (c) auricle, (d) sarcode, (e) cerebellum.

12. Describe and refer to their places in the classification the specimens exhibited.

FOURTH YEAR, AND SENIOR YEAR OF APPLIED SCIENCE.

MINERALOGY AND GEOLOGY, (in part).

WEDNESDAY, DEC. 20TH :—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State the distinctive characters of the following minerals, respectively :—

Calcite and Dolomite.
Blende and Tinstone.
Magnetite and Limonite.

2. Describe the following, and mention important rocks in which they occur:—Pyroxene, Hornblende, Albite.

3. Classify and characterize the principal varieties of Quartz.

4. Explain the origin and mode of occurrence of Rock Salt, Petroleum, Anthracite.

5. State the composition of Pyrite, Galena, Erubescite, Calamine; and what useful substances can be obtained from them.

6. Define the terms aqueous, volcanic, plutonic, and metamorphic, as applied to rocks, with examples.

7. Explain the consolidation and hardening of aqueous deposits, and the usual modes of mineralization of organic remains.

8. Explain dip, strike, anticlinal and synclinal arrangements, and unconformability.

9. Explain denudation, and some of the results which it produces in horizontal and inclined strata.

10. Explain the nature and mode of occurrence of faults, verticality, and contortions of beds.

11. Name the Rocks and Minerals exhibited, and state reasons for so naming them.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

SENIOR SCOTT EXHIBITION

CONSTRUCTION.

SATURDAY, SEPTEMBER 30TH:—MORNING, 9 TO 11.

Examiners,..... { B. J. HARRINGTON, B.A., PH.D.
C. H. MCLEOD, BA. APP. SC.

1. Describe the construction of a blast for making charcoal iron.

2. Give the details of either the Bessemer or Siemens-Martin process for the manufacture of steel.

3. Describe the Gjers Kiln for roasting iron ores.

4. Describe the method usually adopted in pile driving, and the best form of a pile driver with which you are acquainted.

5. Describe the materials which may be employed in forming an artificial foundation on compressible ground, and discuss the relative merits of each in connection with the soil upon which it is placed.

6. Is there any advantage in keeping a cleared space on each side of a road through a wooded country? State the reasons for your answer.

7. Describe generally the method which you would adopt in locating a road, and state the principles by which you would be guided in doing so.

8. What would you consider to be the most durable street pavement?
(*a*) What is the method of construction?

SENIOR SCOTT EXHIBITION.

SURVEYING, LEVELLING AND DRAWING.

SATURDAY, SEPTEMBER 30TH:—AFTERNOON, 2 TO 4.30.

Examiner,.....C. H. MCLEOD, BA. APP. SC.

1. To insure correct levelling is it necessary that the instrument used should traverse? Prove the truth of your answer.

2. Describe and illustrate a method of making a contour survey.

3. How would you conduct a Triangulation Survey of the Island of Montreal?

4. Construct a Cycloid.

5. Show by its vertical and horizontal trace a plane which is touched by the apices of three right hexagonal pyramids having equal bases, of which one side measures one inch and two sides of each touch two other sides. The altitudes of the pyramids being respectively 4 inches, 3 inches, and 2 inches.

6. Project perspectively the group of pyramids in question 5 when the bases of two of the pyramids touch the picture plane.

SENIOR SCOTT EXHIBITION.

MENSURATION.

SATURDAY, SEPTEMBER 30TH:—MORNING, 11 TO 12

Examiner, ...C. H. MCLEOD, BA. APP. SC.

1. Having given the three sides of a triangle, find the length of the perpendicular let fall one of the sides from the opposite angle.

2. Calculate, to three places of decimals, the circumference of a circle in terms of its diameter.

3. Show that the surface of a right cone which is included between two planes parallel to its base, is π S (a+b); where S is the length of slant side and a and b the radii of the sections made by the planes.

4. Calculate the Volume of an oblate Spheroid.

FIRST YEAR.

PRINCIPLES OF MECHANISM.

MONDAY, DECEMBER 18TH:—MORNING, 9 TO 12.

Examiner, ...E. A. HARRIS, C.E.

1. Define a machine. What is the pitch of a tooth? What are spur wheels, bevil wheels, mitre wheels? What property of conical surfaces in contact is made use of in constructing these? What are skew bevils?

2. Where are belts used? What is the property of leather belts when running over a conical surface? What portion of a belt must lie in the same plane as the pulley upon which it runs?

3. With respect to a screw, define *pitch* screw surface, angle of screw right handed and left handed, double threaded and single threaded.

4. Derive the equation which shews the relation between circular and reciprocating motion (see Fig. 1) in the case of a crank.

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5. Derive the equation which shews the relation between circular and reciprocating motion in the case of a crank and link (see Fig. 2).

1st. With respect to the point C.

$$C\,Q = a \cos C + \sqrt{b^2 - a^2 \sin^2 C}.$$

2nd. With respect to D.

$$D\,Q = a\,(1 - \cos C) + b\,(1 - \cos Q.$$

6. What is the equation of the motion of the point Q when the link P Q is infinite?

7. Show some of the devices by which an eccentric circle can be made to produce the same reciprocating motion as a crank with an infinite link.

8. What is the equation corresponding to the motion of the swash plate.

9. What is an escapement? Make sketches of some. What rule must be observed in their construction?

10. What are cams? Give an example of the construction of the curve of one when the direction of the reciprocating passes through the centre of revolution of the cam.

SECOND AND THIRD YEARS.

CONSTRUCTION.

SATURDAY, DECEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....E. A. HARRIS, C.E.

1. (*a*) Name the different methods for plotting a survey. (*b*) Which of these is the most accurate, and why? (*c*) Which is the most inaccurate and why? (*d*) Explain by a figure, and deduce a formula for the method of Latitudes and Departures.

2. (*a*) Apart from climatic considerations what principles should govern you in laying down the grades on the profile of a proposed line of railway? (*b*) What change would you make if the district to be traversed was liable to heavy snow-falls or was very wet, and what effect would the change cause in amounts of excavation and embankment?

3. (*a*) Would you measure the earthwork executed on a line of railway in excavation or in embankment? Give your reasons. (*b*) Name three methods for calculating the excavation on a line of railway. (*c*) Which is generally used for making up an estimate, from the profile of a trial line? (*d*) Which for an estimate, from the cross sections of a located line? Which is used for making up the monthly progress estimates during construction? (*e*) Why is it retained—is the error in excess of the true quantity?

4. The centre cuts on the profile of a trial line are as follow :—

At Station	212	Cut	0.0	Station	214 + 10	Cut	10.00
"	212 + 50	"	6.0	"	215	"	5.00
"	213	"	5.4	"	216	"	3.00
"	214	"	9.8	"	216 + 80	"	0.00

Required an estimate of the amount of excavation, the road bed being 24 ft. and the slopes $1\frac{1}{2}$ to 1.

5. The cross section areas on a located line are as follows :—

Station	416	Area	0.0 sq. ft.	Station	420	Area	400 sq. ft.
"	417	"	120 "	"	421	"	80 "
"	418	"	340 "	"	422	"	0.0 "
"	419	"	500 "				

Required estimate of the excavation.

6. (*a*) What is meant by the "Degree" of a curve? What is the radius of a $\frac{1}{2}°$ curve—of a $3\frac{1}{2}°$? (*b*) In carrying the embankment for a line of railway across a swamp too deep to remove the muck, what foundation is sometimes used? (*c*) What are catch water ditches? (*d*) If the embankment for a line of railway had to run along a side hill how would you ensure it against slipping?

7. (*a*) From certain experiments on the Baltimore and Ohio Railroad it was found that a 1° curve (5730 ft. radius) caused an additional resistance to a train, equal to 0·52 lbs. per ton—required what grade per mile on a straight line this resistance is equivalent to. (*b*) Suppose the curve to continue through 360° what additional distance on a straight line would the resistance just found be equivalent to, supposing the train to move at the rate of 12 miles per hour, and having given that at this rate the resistance on a level straight line is equivalent to ascending a grade of 24 ft. per mile?

8. What general methods would you use for determining the best line in an engineering sense, through (*a*) a wooded country partially settled and possessing few country roads, (*b*) a wooded country, ulmost unknown and possessing very few roads, (*c*) a country totally unexplored and unknown? (*d*) What is the use of the aneroid barometer.

9. What engineering considerations should decide the width of land taken as right of way for a railroad?

10. In making an estimate for a line what addition is usually made for (*a*) "contingencies," (*b*) Station grounds, (*c*) Engineering expenses?

11. What is board measure. How would you find the board measure of any sawn timber? What are the usual scales used in plotting the plan and profile of a survey?

THIRD YEAR.

MECHANICS.

TUESDAY, DECEMBER 19TH:—MORNING, 9 TO 12.

Examiner,.....E. A. HARRIS, C.E.

1. (*a*) What is a force? (*b*) What is necessary to completely determine a force? (*c*) What is meant by the resultant of two or more forces? (*d*) What is mant in statics by reaction? (*e*) State by means of a figure the principle of the lever? (*f*) What conditions are necessary to the equilibrium of three parallel forces?

2. It is required to make a balance such that 1 oz. at one end shall balance 1 lb. at the other, what must be the lengths of the arms respectively? The weight of the beam is neglected, its length is 2 feet.

3. A bridge formed of two parallel girders of 100 feet span is loaded with one ton per foot for 84 feet of its length. The weight of the bridge itself is one half ton per foot. Required the told reaction at each abutment, also the reaction at each abutment for each girder.

4. State the principle of the parallelogram of forces. State that of the triangle of forces, and show that it is true.

If three forces are represented by the sides of a closed triangle, what direction must each force have in order to preserve equilibrium?

Show by a figure.

5. A B C D (Fig. 1) represents a block of wood of weight W. The point B is prevented from sliding. The block is held in position by a rope C E. Show by graphical construction the direction and amount of the pressure through B and the tension on the rope.

6. (*a*) What are the conditions of equilibrium for three inclined forces acting in the same plane on a rigid body?

(*b*) What is the moment of a force? What condition as to moments is necessary to the equilibrium of a body, acted on by any number of forces?

7. B C D E (Fig. 3) represents a block of stone 5 feet long, 2 feet high and $2\frac{1}{2}$ feet wide. A rope E H A is attached to it 6 inches from the end, and passing over the pulley at H, is pulled vertically downward by a force P just sufficient to raise the block. Find P, supposing that the dimensions of the pulley are neglected. B R = 15 feet. H R = 13 feet.

Also show graphically the amount and direction of the pressure through the point C.

The specific gravity of the stone is 2.145.

8. In Fig. 4 show that the total vertical pressure on each wall is W, and the horizontal stress W × BC ÷ 4 AD, W being the weight at A.

9. In what manner may we shift a force acting on a rigid body, without changing its effect on the body?

Two rafters AB and AC are each 20 ft. long. The feet are tied by a horizontal tie-rod of length 35 ft. A weight of 1 ton is suspended at A Determine the tension on the tie, the weight of the rafters being neglected If the tensile strength of the tie-rod is 60,000 lbs. per sq. inch, what must be its diameter (it being circular) to just keep the feet from spreading?

THIRD YEAR.

DESIGNING AND ESTIMATING.

DECEMBER 19TH:—AFTERNOON, 2.30 TO 4.

Examiner,.....E. A. HARRIS, C. E.

1. What should be considered in the design and size of a culvert.

2. What ratio should the discharge area of a culvert bear to the probable greatest discharge of the stream?

3. What precautions are taken to prevent scouring in the case of a box culvert?

4. What is the smallest size of box culvert allowable—why?

5. Name all the parts of the culvert you know.

6. How are culverts set off, and how is the length in any given case determined?

7. Make a sketch in plan, elevation and section of a box culvert. Indidate the calculations for finding the amount of masonry, of paving.

8. How deep should the foundation of the culvert be below the level of paving?

FOURTH YEAR.

ARTS, AND SENIOR YEAR OF DEPARTMENT OF APPLIED SCIENCE.

METEOROLOGY.

SATURDAY, DECEMBER 2ND :—AFTERNOON, 2 to 4.

Examiner..... .....C. H. MCLEOD.

1. State the corrections which are necessary in order that observations of the barometer made at different stations may be compared.

2. Explain the construction of the following instruments.

(*a*) The cistern barometer.
(*b*) The best form of self-registering barometer known to you.
(*c*) An hygrometer.
(*d*) The anemograph.

3. Give a classification of the different kinds of aurora.

4. Explain the formation of hoar-frost.

5. Under what circumstances cannot the mercurial thermometer be used.

JUNIOR YEAR.

SATURDAY, DECEMBER 16TH :—MORNING, 9 TO 12.

CHAIN SURVEYING.

Examiner,.. .....C. H. MCLEOD, BAC. APP. SC.

1. Explain two methods of chaining on sloping ground, and state the circumstances under which you would give either the preference.

2. If it be required to erect a perpendicular from a point A in a given ine, and if any point B be taken without the line and a point C in the line ; find an expression in terms of known sides for the length of the line joining C and B when produced so that its end may be in the required perpendicular

3. Reduce 4,321 *arpents* to acres.

4. How would you produce a line beyond an obstacle to insure the greatest possible accuracy ?

5. Plot the accompanying notes to a scale of three chains to one inch.

(*a*) Reduce the whole figure by a graphical method to a triangle of equal area ; from which calculate the area.

(*b*) Calculate the areas of the several fields directly from the notes.

N.B.—In addition to this paper a chain-survey was plotted by each student from original notes.

		14.55	H
		10.80	Crosses
From	F	0.00	Crosses
		11.03	$\frac{960}{BD}$
	$\frac{1055}{BC}$	3.15	
	$\frac{65}{FH}$	2.55	
		0.20	50
		0.00	Crosses.
		16.60	$\frac{1483}{BC}$ Crosses
	80	16.00	
		2.30	Crosses
	40	2.00	
From	$\frac{D}{BD}$ to ri	0.00	
		23.00	D
		18.40	60
		15.00	60
		13.30	Crosses
	40	12.80	
	24	9.80	Crosses
		9.60	
		5.50	Crosses
From	$\frac{B}{BC}$ to left	0.00	
	80	30.00	A Crosses
	80	26.15	
		21.60	Crosses
		17.00	80
		10.50	80
		8.30	Crosses
	160	3.95	
		3.10	Crosses
From	$\frac{C}{BC}$ to right	0.00	
		27.70	C
	55	25.00	Crosses
	55	15.75	
		14.83	G Crosses
		11.12	F Crosses
		10.55	E
		0.70	Crosses
From	$\frac{B}{AB}$ to right	0.00	
		22.00	B
		21.30	Crosses
	40	21.10	
		10.60	Crosses
		8.95	H
	100	5.10	
From	A	0.00	Crosses

JUNIOR YEAR.

DRAWING.

MONDAY, DECEMBER 18TH :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, BAC. APP. SC.

1. Construct geometrically :—

(*a*) An equilateral triangle about a circle whose diameter is 2·5 in.

(*b*) A regular octagon equal in area to a square of 3·15 in. side.

(*c*) A parabolic arch the span of which is 4·25 in. and rise 2 in.

(*d*) An hypocycloidal curve the radius of the directing circle being 4 in., and that of the generating circle 1·5 in.

2. Project orthographically :—

(*a*) A piece of wire, in the form of a semi-circle whose radius is 2 in., when parallel to the horizontal and the right line joining its ends makes an angle of 30° with the vertical plane.

(*b*) An hexagonal pipe of 1·5 in. side and 5 in. long, when one of its sides is parallel to the vertical plane and when it is cut by a plane perpendicular to the vertical, so that, the upper portion being turned through 180° and placed upon the lower, its axis, coinciding with that of the lower, makes with it an angle of 60°.

3. Show a development of the figure in question 2 (*b*) ; also the section made by the cutting plane.

MIDDLE YEAR.

DRAWING.

MONDAY, DEC. 18TH :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, BAC. APP. SC.

Project perspectively on a scale of half an inch to the foot; the height of the eye being six feet and the distance of the spectator twelve feet.

1. An open rectangular box, the external dimensions of which are 5 ft. by 3 ft. by 1 ft. deep ; and which is composed of material 3 in. thick. The corner nearest the spectator is 2 ft. on the left of the centre and 2 ft. within the picture, its open side being nearest the foreground and parallel to the picture plane.

2. A block of wood 4 ft. square by 1 ft. high which is surmounted by a square prism of 2 ft. side whose height is 8 ft. and upon which again rests a block 3 ft. square by 1 ft. high. The axes of all three coincide. The object is placed 5 ft. on the right and 4 ft. within the picture.

3. The frustrum of a square pyramid which supports a cube, their axes forming one right line and the sides of the cube being parallel to the corresponding basal edges of the frustrum. The lengths of the sides of the upper and lower bases of the frustrum are respectively 3 ft. and 4 ft and its height 4 ft. The sides of the cube are 4·5 ft. The figure is in the foreground and 5 ft. on the left.

4. A pyramid the altitude of which is 8 ft. and the base of which is a square of 4·5 ft. side, when placed so that the axis is perpendicular to the picture plane; the apex being 5 ft. on the left and in the foreground.

MIDDLE YEAR.

ENGINEERING FIELD WORK.

TUESDAY, DECEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner,.....C. H. MCLEOD, BAC. APP. SC.

1. Give a description, in detail, of the preliminary surveys and location of a road. (*a*) Along the base of a mountain. (*b*) When there is choice of route.

2. Describe a method of conducting a Contour-survey.

3. Describe two methods of setting out work. (*a*) In earth only. (*b*) When there is cutting in rock covered with a layer of earth.

N.B.—A *viva voce* examination on the use of field instruments was also held.

MIDDLE YEAR.

MENSURATION.

TUESDAY, DECEMBER 19TH :—MORNING, 9 to 12.

Examiner,..... C. H. MCLEOD, BAC. APP. SC.

1. Find an approximate expression for the ratio of the circumference of a circle to its diameter. (a) Hence deduce the area of a circle.

2. A circle of 10 in. radius is to be divided into three equal parts by concentric circles; find the lengths of their radii.

3. The area enclosed between two concentric circles is equal to the area of a circle whose diameter is a chord of the exterior circle touching the interior.

4. The surface of a spherical zone is equal to the product of its altitude by the circumference of the sphere.

5. Compare the surface of a sphere with the interior surface of a cylinder which just contains it.

6. The surface of a sphere is 120 square feet and the sum of the angles of a triangle on its surface is 180° 10. Calculate the area of the triangle.

7. Prove the method employed in question 6.

8. What part of the whole surface of the earth would be seen by an observer five miles above it?

9. Find the solid content of the frustrum of a cone, the perpendicular height of which is 7 feet, and the radii of the ends respectively 5 feet and 4 feet.

10. Prove the formula used to solve question 9.

11. Calculate the volume generated by the revolution of a circular segment about an axis in its own plane which also passes through the centre of the circle of which the segment forms a part.

12. Find the radius of a sphere whose volume is 2 cubic feet.

FOURTH YEAR ARTS AND SENIOR YEAR.

METEOROLOGY.

SATURDAY, DECEMBER 2ND:—AFTERNOON, 2 to 4.

Examiner,.....C. H. MCLEOD, BA. APP. SC.

1. State the corrections which are necessary in order that observations of the barometer made at different stations may be compared.

2. Explain the construction of the following instruments.

(*a*) The adjustable cistern barometer.
(*b*) The best form of self-registering barometer known to you.
(c) An hygrometer.
(*d*) The anemograph.

3. Give a classification of the different kinds of aurora.

4. Explain the formation of hoar-frost.

5. Under what circumstances cannot the mercurial thermometer be used.

SESSIONAL EXAMINATIONS, 1877.

CLASSICS.

FIRST YEAR.

GREEK.—XENOPHON.—HELLENICS, BOOK I.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12

Examiner .....Rev. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Ὁ δὲ Καλλικρατίδας ἀκούων τὴν βοήθειαν ἤδη ἐν Σάμῳ οὖσαν, αὐτοῦ μὲν κατέλιπε πεντήκοντα ναῦς καὶ ἄρχοντα Ἐτεόνικον, ταῖς δὲ εἴκοσι καὶ ἑκατὸν ἀναχθεῖς ἐδειπνοποιεῖτο τῆς Λέσβου ἐπὶ τῇ Μαλέᾳ ἄκρᾳ ἀντίον τῆς Μυτιλήνης. τῇ δ' αὐτῇ ἡμέρᾳ ἔτυχον καὶ οἱ Ἀθηναῖοι δειπνοποιούμενοι ἐν ταῖς Ἀργινούσαις· αὗται δ' εἰσὶν ἀντίον τῆς Λέσβου. τῆς δὲ νυκτὸς ἰδὼν τὰ πυρά, καί τιων αὐτῷ ἐξαγγειλάντων ὅτι οἱ Ἀθηναῖοι εἶεν, ἀνήγετο περὶ μέσας νύκτας, ὡς ἐξαπιναίως προσπέσοι· ὕδωρ δ' ἐπιγενόμενον πολὺ καὶ βρονταὶ διεκώλυσαν τὴν ἀναγωγήν. ἐπεὶ δὲ ἀνέσχεν, ἅμα τῇ ἡμέρᾳ ἔπλει ἐπὶ τὰς Ἀργινούσας. οἱ δ' Ἀθηναῖοι ἀντανήγοντο εἰς τὸ πέλαγος τῷ εὐωνύμῳ, παρατεταγμένοι ὧδε. Ἀριστοκράτης μὲν τὸ εὐώνυμον ἔχων ἡγεῖτο πεντεκαίδεκα νανσί, μετὰ δὲ ταῦτα Διομέδων ἑτέραις πεντεκαίδεκα· ἐπετέτακτο δὲ Ἀριστοκράτει μὲν Περικλῆς, Διομέδοντι δὲ Ἐρασινίδης· παρὰ δὲ Διομέδοντα οἱ Σάμιοι δέκα νανσὶν ἐπὶ μιᾶς τεταγμένοι. ἐστρατήγει δὲ αὐτῶν Σάμιος ὀνόματι Ἱππεύς· ἐχόμεναι δ' αἱ τῶν ταξιάρχων δέκα, καὶ αὗται ἐπὶ μιᾶς· ἐπὶ δὲ ταύταις αἱ τῶν ναυάρχων τρεῖς, καὶ εἴ τινες ἄλλαι ἦσαν συμμαχίδες.

(B) Οἱ δὲ Ἀθηναῖοι ἀνταναγαγόμενοι ἐναυμάχησαν περὶ Ἄβυδον κατὰ τὴν ἠόνα μέχρι δείλης ἐξ ἑωθινοῦ. καὶ τὰ μὲν νικώντων, τὰ δὲ νικωμένων, Ἀλκιβιάδης ἐπεισπλεῖ δυοῖν δεούσαις εἴκοσι ναυσίν· ἐντεῦθεν δὲ φυγὴ τῶν Πελοποννησίων ἐγένετο πρὸς τὴν Ἄβυδον· καὶ ὁ Φαρνάβαζος παρεβοήθει, καὶ ἐπεισβαίνων τῷ ἵππῳ εἰς τὴν θαλατταν, μέχρι δυνατὸν ἦν ἐμάχετο, καὶ τοῖς ἄλλοις τοῖς αὐτοῦ ἱππεῦσι καὶ πεζοῖς παρεκελεύετο. Συμφράξαντες δὲ τὰς ναῦς οἱ Πελοπουνήσιοι

καὶ παραταξαμένοι πρὸς τῇ γῇ ἐμάχοντο. Ἀθηναῖοι δὲ ἀπέπλευσαν, τριάκοντα ναῦς τῶν πολεμίων λαβοντες κενάς καὶ ἃς αὐτοὶ ἀπώλεσαν κομισάμενοι, εἰς Σηστόν. Ἐντεῦθεν πλὴν τετταράκοντα νεῶν ἄλλαι ἄλλῃ ᾤχοντο ἐπ' ἀργυρολογίαν ἔξω τοῦ Ἑλλησπόντου· καὶ ὁ Θράσυλλος, εἷς ὢν τῶν στρατηγῶν, εἰς Ἀθήνας ἔπλευσε ταῦτα ἐξαγγελῶν καὶ στρατιὰν καὶ ναῦς αἰτήσων.

2. (*a*) In ext. (A) explain the use of the cases, severally, in:—*τῇ αὐτῇ ἡμέρᾳ. τῆς νυκτός. τινων ἐξαγγειλάντων. μέσας νύκτας. τῷ εὐωνύμῳ.* (*b*) Give the exact import of *ἀνήγετο* and parse it. *ἀνέσχεν*, —What is the subject? Illustrate from Latin and English. (*c*) *Τὰ μὲν νικώντων, τὰ δὲ νικωμένων*:—(1) Explain the use of the Genitive. (2) Parse and explain the use of *τά*. (3) Derive the particles *μὲν* and *δέ*, and illustrate their use.

3. Explain carefully the grammatical construction of:—(*a*) *περιτυχῶν δυοῖν τριήροιν ἔλαβεν αὐτοῖς ἀνδράσιν.* (*b*) *ἵππων εὐπορήσαντες.* (*c*) *τοῦ χωρίου ἐπιμελεῖσθαι.* (*d*) *τοῖς ὅρκοις οὐκ ἐτύγχανε παρών.* (*e*) *τριάκοντα μνᾶς ἑκάστῃ τῇ νηὶ τοῦ μηνὸς διδόναι.*

4. Parse carefully the following:—*ἐξαγγεῖλαι, ἐξαγγεῖλαι, πεπονθέναι, ἐροῦντα, ἀφεῖσαν, προπιών, ἐπεσταλκέναι, ἠσεβήκει, ἀνήχθη, ἀπεσώθη.*

5. Write short exptanatory notes on:—*μνᾶ, ὀβολός, δραχμή, περίοικοι, ἐπιβάτης, ἐφορεύοντος, ἁρμοστης, νεοδαμῶδες.*

6. Give the exact derivation and meaning of the following words:—*τριήρης, ἀκράτειαν, ἀμηχανίας, ἀκροβολισμοὺς καὶ προσβολάς, πρηστῆρος, ἀτέλειαν, ξυνωρίς, προνομήν, δείλης.* (*b*) Name the dialect of the following ext.; turn it into Attic; and translate, noticing variants *κᾶλα* and *καλά*:—*Ἔρρει τὰ κᾶλα. Μίνδαρος ἀπεσσύα. πεινῶντι τῶνδρες. ἀπορίομες τί χρὴ δρᾶν.*

7. Give the geographical situation of the following places:—Cyzicus, Caria, Madytus, Sestus, Proconnessus (give the derivation) Perinthus, Syracuse, Thurii.

8. (*a*) Decline *νῆσος, κέρας, πόλις, ἀρετή, προθυμία.* (*b*) Compare *μικρος, πρέσβυς, ἀγαθός, πολύς, μάλα.* (*c*) Form the *Future Passive* and *Middle* of *τρέπω*. Show how the *Future Active* of *ἀγγέλλω* is formed. Form the *Future* (1st Sing.) in all voices of *τρίβω* and *πείθω*.

9. Distinguish between the use of the *Imperfect* and *Aorist Indicative*; also, between the *Present* and *Aorist Subjunctive*.

10. Translate into Greek:—

1. Socrates, the philosopher, said this. 2. One who admires the citizens of the olden time will not praise those of the present time.

3. Good men ought to bear what comes from the gods. 4. The soldiers in the city are brave. 5. A certain man came and said that the brave soldiers were in the city. 6. The king himself admired the navy of the Athenians. 7. Those who manage affairs ill do the greatest harm to the state. 8. In that fight the Athenians fled away from the Lacedæmonian hoplites, and the army of the Lacedæmonians came and remained there many days, and ravaged the whole country.

INTERMEDIATE EXAMINATION.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

GREEK.—POLYBIUS.—BOOK III., CHAPP. XX.-LX.

Examiners..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, M.A.

1. Translate:—

(A) Τούτων δὴ τοιούτων ὑπαρχόντων, ὁμολογούμενον ἦν κἀκεῖνο, διότι Ζακανθαῖοι πλείοσιν ἔτεσιν ἤδη πρότερον τῶν κατ' Ἀννίβαν καιρῶν ἐδεδώκεισαν αὐτοὺς εἰς τὴν Ῥωμαίων πίστιν. σημεῖον δὲ τοῦτο μέγιστον, καὶ παρ' αὐτοῖς τοῖς Καρχηδονίοις ὁμολογούμενον, ὅτι στασιάσαντες Ζακανθαῖοι πρὸς σφᾶς, οὐ Καρχηδονίοις ἐπέτρεψαν, καίπερ ἐγγὺς ὄντων αὐτῶν, καὶ τὰ κατὰ τὴν Ἰβηρίαν ἤδη πραττόντων, ἀλλὰ Ῥωμαίοις, καὶ διὰ τούτων ἐποιήσαντο τὴν κατόρθωσιν τῆς πολιτείας. Διόπερ, εἰ μέν τις τὴν Ζακάνθης ἀπώλειαν αἰτίαν τίθησι τοῦ πολέμου, συγχωρητέον ἀδίκως ἐξενηνοχέναι τὸν πόλεμον Καρχηδονίους κατά τε τὰς ἐπὶ τοῦ Λουτατίου συνθήκας καθ' ἃς ἐδει τοῖς ἑκατέρων συμμάχοις τὴν ὑφ' ἑκατέρων ἀσφάλειαν, κατά τε τὰς ἔπ' Ἀσδρούβου, καθ' ἃς οὐκ ἐδεί διαβαίνειν τὸν Ἴβηρα ποταμὸν ἐπὶ πολέμῳ Καρχηδονίους. εἰ δὲ τὴν Σαρδόνος ἀφαίρεσιν καὶ τὰ σὺν ταύτῃ χρήματα, πάντως ὁμολογητέον εὐλόγως πεπολεμηκέναι τὸν κατ' Ἀννίβαν πόλεμον τοὺς Καρχηδονίους· καιρῷ γὰρ πεισθέντες, ἠμύνοντο σὺν καιρῷ τοὺς βλάψαντας.

(B) Οἱ δὲ παρὰ τῶν Ῥωμαίων πρέσβεις, τὴν γὰρ παρέκβασιν ἐντεῦθεν ἐποιησάμεθα, διακούσαντες τὰ παρὰ τῶν Καρχηδονίων ἄλλο μὲν οὐδὲν εἶπαν, ὁ δὲ πρεσβύτατος αὐτῶν δείξας τοῖς ἐν τῷ συνεδρίῳ τὸν κόλπον, ἐνταῦθα καὶ τὸν πόλεμόν αὐτοῖς ἔφη καί τὴν εἰρήνην φέρειν· ἐκβαλὼν οὖν, ὁπότερον ἂν κελεύσωσιν, ἀπολείψειν. ὁ δὲ βασιλεὺς τῶν Καρχηδονίων, ὁπότερον αὐτοῖς φαίνεται, τοῦτ' ἐκβαλεῖν ἐκέλευσε. τοῦ δὲ Ῥωμαίου φήσαντος τὸν πόλεμον ἐβαλεῖν, ἀνεφώνησαν ἅμα καὶ πλείους τῶν ἐκ τοῦ συνεδρίου, δέχεσθαι φάσκοντες. οἱ μὲν οὖν πρέσβεις καὶ τὸ συνέδριον ἐπὶ τούτοις ἐχωρίσθησαν. Ἀννίβας δέ, παραχειμάζων ἐν Καινῇ πόλει, πρῶτον μὲν διαφῆκε τοὺς Ἴβηρας ἐπὶ τὰς ἑαυτῶν πόλεις, βουλόμενος ἑτοίμους καὶ προθύμους παρασκευάζειν πρὸς τὸ μέλλον,

δεύτερον δ' Ἀσδρούβᾳ τἀδελφῳ διέταξε πῶς δεήσει τῇ τε τῶν Ἰβήρων ἀρχῇ καὶ δυναστείᾳ χρῆσθαι ταῖς τε πρὸς Ῥωμαίους παρασκευαῖς, ἐὰν αὐτὸς χωρίζηταί που, τρίτον ὑπὲρ τῆς ἀσφαλείας τῶν ἐν Λιβύῃ προυνοεῖτο πραγμάτων.

(C) Αὐτὸς δὲ συναγαγὼν τὰς δυνάμεις εἰσήγαγε τοὺς βασιλίσκους τοὺς περὶ Μάγιλον· οὗτοι γὰρ ἦκον πρὸς αὐτὸν ἐκ τῶν περὶ τόν Πάδον πεδίων· καὶ δι' ἑρμηνέως τὰ δεδογμένα παρ' αὐτῶν διεσάφει τοῖς ὄχλοις. ἦν δὲ τῶν λεγομένων ἰσχυρότατα πρὸς θάρσος τῶν πολλῶν πρῶτον μὲν ἡ τῆς παρουσίας ἐνάργεια τῶν ἐπισπωμένων καὶ κοινωνήσειν ἐπαγγελλομένων τοῦ πρὸς Ῥωμαίους πολέμου, δεύτερον δὲ τό τῆς ἐπαγγελίας αὐτῶν ἀξιόπιστον, ὅτι καθηγήσονται διὰ τόπων τοιούτων δι' ὧν οὐδενὸς ἐπιδεόμενοι τῶν ἀναγκαίων συντόμως ἅμα καὶ μετὰ ἀσφαλείας ποιήσονται τὴν εἰς Ἰταλίαν πορείαν, πρὸς δὲ τούτοις ἡ τῆς χώρας γενναιότης, εἰς ἣν ἀφίξονται, καὶ τὸ μέγεθος, ἔτι δὲ τῶν ἀνδρῶν ἡ προθυμία, μεθ' ὧν μέλλουσι ποιεῖσθαι τοὺς ἀγῶνας πρὸς τὰς τῶν Ῥωμαίων δυνάμεις. οἱ μὲν οὖν Κελτοὶ τοιαῦτα διαλεχθέντες ἀνεχώρησαν.

2. Translate the following extt., and carefully explain their grammatical construction:—(*a*) προσπεπτωκυίας αὐτοῖς τῆς τῶν Ζακανθαίων ἁλώσεως. (*b*) ἅμα δὲ τοὺς υἱοὺς ἀπὸ δώδεκα ἐτῶν ἄγειν φασὶ τοὺς πατέρας εἰς τὸ συνέδριον, οὓς μετέχοντας τῶν διαβουλίων, οὐδὲ τῶν ἀναγκαίων οὐδενὶ προΐεσθαι τῶν ἀπορρήτων οὐδέν.

3. Give the etymology and meaning of the following words used by Polybius:—ὁλοσχέστερον, ῥάχιν, ἐνάργεια, ἀκεραίου, προτροπάδην, μονοξύλων, κρουσματικαῖς, προσφάτως, κουρεακῆς, δικαιολογίαν, πληρώματα, τὸν κόλπον.

4. Write explanatory notes on the following geographical references and give, when you can, the Latin and modern names:—(1) ἐπέκεινα τοῦ Καλοῦ ἀκρωτηρίου. (2) Μαστία. (3) τὴν Ζακάνθην. (4) τὸν Ἴβηρα. (5) αἱ Βαλιαρεῖς. (6) Λακίνιον. (7) ὁ Νάρβων ποταμός. (8) οἱ Φιλαίνου βωμοί. (9) ἡ Καινὴ πόλις. (10) τὰ περὶ τὸν Πάδον πεδία.

5. Analyse and parse the following words, and give the derivation, if any, and the principal parts of the verbs:—προσαπηρείδονται, προσπεριειλήφασι, ἐξενηνοχέναι, ἐκαραδόκει, ἐξητάκει, κατῆρε, παρηλλαγμένον, χιόνα, διαμεμενηκυῖαν, ἐπιετοῦς, πεπτωκυίας, πεσόντες, καταπεπηγότα, πλήθη. Give cognate forms in Latin or English, of such as have them.

6. (*a*) Write out the *Present Indicative, Subjunctive, and Optative,* contracted and non-contracted, with accents, of δουλόω. (*b*) Distinguish by the accent three forms of δουλωσαι. (*c*) Parse and accentuate τυπειν, τυπου, τυπων, τυπηναι, τυπεις, τιμησας, λελοιπως, στελω, στελουμαι. (*d*) Decline, marking the accents:—ἀνήρ, γυνή, χείρ, ναῦς, ὕδωρ, πολύς.

7. State and illustrate the rule for the Sequence of Tenses.

8. Give a brief sketch of Polybius' life, stating the period in Greek Literature to which he belonged, and naming the other historians of the same period. Enumerate his works, mentioning the original extent of his History, the remains of it, and his merits and demerits as a Historian.

THIRD YEAR.

GREEK.—AESCHYLUS.—PROMETHEUS VINCTUS.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner .....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A)

ΠΡ. Καὶ μὴν φίλοις ἑλεινὸς εἰσορᾶν ἐγώ.
ΧΟ. μή πού τι προῦβης τῶνδε καὶ περαιτέρω;
ΠΡ. θνητούς γ' ἔπαυσα μὴ προδέρκεσθαι μόρον.
ΧΟ. τὸ ποῖον εὑρὼν τῆσδε φάρμακον νόσου;
ΠΡ. τυφλὰς ἐν αὐτοῖς ἐλπίδας κατῳκισα.
ΧΟ. μεγ' ὠφέλημα τοῦτ' ἐδωρήσω βροτοῖς.
ΠΡ. πρὸς τοῖσδε μέντοι πῦρ ἐγώ σφιν ὥπασα.
ΧΟ. καὶ νῦν φλογωπὸν πῦρ ἔχουσ' ἐφήμεροι;
ΠΡ. ἀφ' οὗ γε πολλὰς ἐκμαθήσονται τέχνας.
ΧΟ. τοιοῖσδε δή σε Ζεὺς ἐπ' αἰτιάμασιν
αἰκίζεταί τε κοὐδαμῇ χαλᾷ κακῶν,
οὐδ' ἔστιν ἄθλου τέρμα σοι προκείμενον;
ΠΡ. οὐκ ἄλλο γ' οὐδὲν, πλὴν ὅταν κείνῳ δοκῇ.
ΧΟ. δόξει δὲ πῶς; τίς ἐλπίς; οὐχ ὁρᾷς ὅτι
ἡμαρτες; ὡς δ' ἡμαρτες οὔτ' ἐμοὶ λέγειν
καθ' ἡδονὴν σοί τ' ἄλγος. ἀλλὰ ταῦτα μὲν
μεθῶμεν, ἄθλων δ' ἔκλυσιν ζήτει τινά.

(B)

Λέξω δὲ, μέμψιν οὕτιν' ἀνθρώποις ἔχων,
ἀλλ' ὧν δέδωκ' εὔνοιαν ἐξηγούμενος·
οἱ πρῶτα μὲν βλέποντες ἔβλεπον μάτην,
κλύοντες οὐκ ἤκουον, ἀλλ' ὀνειράτων
ἀλίγκιοι μορφαῖσι τὸν μακρὸν χρόνον
ἔφυρον εἰκῇ πάντα, κοὐτε πλινθυφεῖς
δόμους προσείλους ἦσαν, οὐ ξυλουργίαν·
κατώρυχες δ' ἔναιον ὥστ' ἀήσυροι
μύρμηκες ἄντρων ἐν μυχοῖς ἀνηλίοις.

ἦν δ' οὐδὲν αὐτοῖς οὔτε χείματος τέκμαρ
οὔτ' ἀνθεμώδους ἦρος οὔτε καρπίμου
θέρους βέβαιον, ἀλλ' ἄτερ γνώμης τὸ πᾶν
ἔπρασσον, ἐς τε δή σφιν ἀντολὰς ἐγὼ
ἄστρων ἐδειξα τάς τε δυσκρίτους δύσεις·
καὶ μὴν ἀριθμὸν ἔξοχον σοφισμάτων
ἐξεῦρον αὐτοῖς, γραμμάτων τε συνθέσεις,
μνήμης ἁπάντων μουσομήτορ' ἐργάνην·
κἀζευξα πρῶτος ἐν ζυγοῖι κνώδαλα
ζεύγλαισι δουλεύοντα σώμασίν θ' ὅπως
θνητοῖς μεγίστων διάδοχοι μοχθημάτων
γένοινθ'· ὑφ' ἅρματ' ἤγαγον φιλήνιους
ἵππους, ἀγαλμα τῆς ὑπερπλούτου χλιδῆς.
θαλασσόπλαγκτα δ' οὔτις ἄλλος ἀντ' ἐποῦ
λινόπτερ' εὗρε ναυτίλων ὀχήματα.
τοιαῦτα μηχανήματ' ἐξευρὼν τάλας
βροτοῖσιν, αὐτὸς οὐκ ἔχω σόφισμ' ὅτῳ
τῆς νῦν παρούσης πημονῆς ἀπαλλαγῶ

2. (*a*) Give an outline of the Plot of this drama, with the names of the Dramatis Personæ. (*b*) Cite the passage in this play which is supposed to fix the date of its representation. (*c*) The Prometh. Vinct. formed one of a series of Dramas on the story of Prometheus; name and explain the subjects of the others. By what term was such a series designated?

3. Write explanatory notes on:—(1) *τύχαι Ἄτλαντος.* (2) *Τυφῶνα θοῦρον.* (3) *ἱπούμενος.* (4) *ἐκραγήσονται * * * γύας.* (5) *μασχαλιστῆρας.* (6) *τὰ μέν σ' ἐπαινῶ.* (7) *ἀκοιμήτῳ ῥεύματι.* (8) *Σκύθην οἶμον.* (9) *ναρθηκοπλήρωτον.* (10) *ἀπεδίλος.*

4. State as accurately as you can, the meaning, and give the derivation of the following words:—*λεωργόν, διαμπάξ, διατόρους, ποταίνιον, πελώρια, ἀρθμόν, πέδοι, παράορος, ἀπλάτου, ἐπηβόλους, ἀήσυροι, προσείλους.*

5. Explain the syntax of the following:—(*a*) *ἄτερ γνώμης τὸ πᾶν ἔπρασσον.* (*b*) *ἀλλ' ὧν δέδωκ' εὔνοιαν ἐξηγούμενος.* (*c*) *μάχας ἄτρεστοι.* (*d*) *μή τι προὔβης τῶνδε.* (*e*) *ὡς μήτε θεὸς μήτε τις ἄλλος τοῖσδ' ἐπεγήθει.* (*f*) *σφῷν μὲν ἐντολὴ Διὸς ἔχει τέλος.*

6. Give the different interpretations of the following passages, according to the var. lectt.:—(*a*) *ἅπαντ' ἐπαχθῆ* (*ἐπράχθη*) *πλὴν θεοῖσι δκοιρανεῖν.* (*b*) *ἄβατον* (*ἄβροτον*) *εἰς ἐρημίαν.* (*c*) *ἐξωριάζειν* (*εὐωριάζειν λόγους.* (*d*) *πόλον ὑποστεγάζει—ὑποστενάζει—ὀχῶν στενάζει.* (*e*) Discuss the various readings and punctuation of vss. 18-21 of ext. (*B*) and show that those here given are preferable.

7. Parse the following:—*ἀχθεσθῆ, ἦσαν, ἀφῖξαι, πεποιθέναι, ῥαισθῇ, προσῆξε, ἐπηύρου, ἐφεῖτο, παρεστώτων, σαφηνιῶ, λέλακε, ἐδωρήσω.*

8. Write out the equivalents of the following forms:—*τἀν, τἄν οὐμός, προὐτεθεσπίκει, κἀν, κἄν, ταὐτοῦ, οὕνεκα.*

9. (*a*) Write down the Attic for the following:—*τύχας, οὐλομένας, τάν, τᾶν, παγαῖς, εἰβομένα, τᾶς, ἀχώ, προσέβα.* (*b*) Explain the forms and name the dialect of *οἰκτιεῖς, βᾶσαι, πελῶ, ἦσαν.*

10. Give the scale of the metre, and scan the first four vss. of ext. (A).

B.A. ORDINARY EXAMINATION.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

GREEK.—{ HERODOTUS.—BOOK IX.
{ ÆSCHYLUS.—PROMETHEUS VINCTUS.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
{ REV. GEORGE WEIR, M.A.

1. Translate:—

(A) Τέλος δὲ, τῆς τε ὑποκρίσιος καὶ ἐξόδου τῶν Σπαρτιητέων ἐγένετο τρόπος τοιόσδε· τῇ προτεραίῃ τῆς ὑστάτης καταστάσιος μελλούσης ἔσεσθαι, Χίλεος, ἀνὴρ Τεγεήτης, δυνάμενος ἐν Λακεδαίμονι μέγιστα ξείνων, τῶν ἐφόρων ἐπύθετο πάντα λόγον τὸν δὴ οἱ Ἀθηναῖοι ἔλεγον. ἀκούσας δὲ ὁ Χίλεος ἔλεγε ἀρα σφι τάδε· "οὕτω ἔχει, ἄνδρες ἔφοροι· Ἀθηναίων ἡμῖν ἐόντων μὴ ἀρθμίων τῷ δὲ βαρβάρῳ συμμάχων, καίπερ τείχεος διὰ τοῦ Ἰσθμοῦ ἐληλαμένου καρτεροῦ, μεγάλαι κλισιάδες ἀναπεπτέαται ἐς τὴν Πελοπόννησον τῷ Πέρσῃ. ἀλλ' ἐσακούσατε, πρίν τι ἄλλο Ἀθηναίοισι δόξαι σφάλμα φέραν τῇ Ἑλλάδι." Ὁ μέν σφι ταῦτα συνεβούλευε· οἱ δὲ φρενὶ λαβόντες τὸν λόγον, αὐτίκα, φράσαντες οὐδὲν τοῖσι ἀγγέλοισι τοῖσι ἀπιγμένοισι ἀπὸ τῶν πολίων, νυκτὸς ἔτι ἐκπέμπουσι πεντακισχιλίους Σπαρτιητέων, [καὶ ἑπτὰ περὶ ἕκαστον τάξαντες τῶν εἰλώτων,] Παυσανίῃ τῷ Κλεομβρότου ἐπιτρέψαντες ἐξάγειν.

(B) Εἶχε δὲ ὁ Ἀρταβάζος δύναμιν οὐκ ὀλίγην, ἀλλὰ καὶ ἐς τέσσερας μυριάδας ἀνθρώπων περὶ ἑωυτόν· τούτους, ὅκως ἡ συμβολὴ ἐγίνετο, εὖ ἐξεπιστάμενος τὰ ἐμελλε ἀποβήσεσθαι ἀπὸ τῆς μάχης, ἦγε κατηρτημένους, παραγγείλας κατὰ τώυτὸ ἰέναι πάντας τῇ ἂν αὐτὸς ἐξηγέηται, ὅκως ἂν αὐτὸν ὁρέωσι σπουδῆς ἔχοντα· ταῦτα παραγγείλας, ὡς ἐς μάχην ἦγε δῆθεν τὸν στρατόν· προτερέων δὲ τῆς ὁδοῦ, ὥρα καὶ δὴ φεύγοντας τοὺς Πέρσας· οὕτω δὲ οὐκέτι τὸν αὐτὸν κόσμον κατηγέετο, ἀλλα τὴν ταχίστην ἐτρόχαζε φεύγων, οὔτε ἐς τὸ ξύλινον οὔτε ἐς τὸ Θηβαίων τεῖχος ἀλλ' ἐς Φωκέας, ἐθέλων ὡς τάχιστα ἐπὶ τὸν Ἑλλήσποντον

ἀπικέσθαι· καὶ δὴ οὗτοι μὲν ταύτῃ ἐτράποντο. Τῶν δὲ ἄλλων Ἑλλήνων τῶν μετὰ βασιλέος ἐθελοκακεόντων, Βοιωτοὶ Ἀθηναίοισι ἐμαχέσαντο χρόνον ἐπὶ συχνόν· οἱ γὰρ μηδίζοντες τῶν Θηβαίων, οὗτοι εἶχον προθυμίην οὐκ ὀλίγην, μαχεόμενοί τε καὶ οὐκ ἐθελοκακέοντες οὕτω ὥστε τριηκόσιοι αὐτῶν οἱ πρῶτοι καὶ ἄριστοι ἐνθαῦτα ἔπεσον ὑπὸ Ἀθηναίων· ὡς δὲ ἐτράποντο καὶ οὗτοι, ἐφευγον ἐς τὰς Θήβας οὐκ ἦπερ οἱ Πέρσαι· καὶ τῶν ἄλλων συμμάχων ὁ πᾶς ὅμιλος οὔτε διαμαχεσάμενος οὐδενὶ οὔτε τι ἀποδεξάμενος ἔφευγον.

2. (*a*) Σπαρτιητέων, εἰλώτων:—Name the three distinct classes of the population of Lacedæmon, in respect of their tribal relationships, and social and political position in the state. Give the received date of the Dorian conquest of the Peloponnesus. (*b*) By what routes could Boeotia be entered from Attica? (*c*) τοῦ Πιτανητέων λόχου:—explain. (*d*) τίθεσθαι τὰ ὅπλα:—give the various meanings.

3. Construe and explain:—(*a*) ἐδίωκον ὡς ποδῶν ἕκαστος εἶχον. (*b*) τῆς ὑστάτης καταστάσιος. (*c*) ὅκως ἂν αὐτὸν ὁρέωσι σπουδῆς ἔχοντα. (*d*) προτερέων τῆς ὁδοῦ. (*e*) What variants are there for ἦγε κατηρτημένους.

4. (*a*) Parse carefully the following Verbs, and give Attic equivalents of Ionic forms:—ὑπήσειν, ἀναπεπτέαται, ἀνελοίατο, ἐδικαίευν, ἔσκον, εἰδεῖεν, ἐώθεσαν, ἐῶν. (*b*) Write short notes explanatory of the etymology and meaning of:—ἄνοπλοι, γέρρα, ἀπέδου, ἀπλέτῳ, λιπαρίῃ, κρησφύγετον, ἀνεκώχευε, Ὑακίνθια. (*c*) Distinguish between:—βίους and βιούς. ὥρα and ὦρα. ἦραν and ἤραν. κεῖνον and κεινόν. εἶκων and εἰκών.

5. Translate:—

(C) ΧΟ. σιδηρόφρων τε κἀκ πέτρας εἰργασμένος
ὅστις, Προμηθεῦ, σοῖσιν οὐ συνασχαλᾷ
μόχθοις· ἐγὼ γὰρ οὖτ' ἂν εἰσιδεῖν τάδε
ἔχρηζον εἰσιδοῦσά τ' ἠλγύνθην κέαρ.
ΠΡ. καὶ μὴν φίλοις ἐλεινὸς εἰσορᾶν ἐγώ.
ΧΟ. μή πού τι προῦβης τῶνδε καὶ περαιτέρω;
ΠΡ. θνητοὺς γ' ἐπαυσα μὴ προδέρκεσθαι μόρον.
ΧΟ. τὸ ποῖον εὗρῶν τῆσδε φάρμακον νόσου;
ΠΡ. τυφλὰς ἐν αὐτοῖς ἔλπίδας κατῴκισα.
ΧΟ. μέγ' ὠφέλημα τοῦτ' ἐδωρήσω βροτοῖς.
ΠΡ. πρὸς τοῖσδε μέντοι πῦρ ἐγώ σφιν ὤπασα.
ΧΟ. καὶ νῦν λογωπὸν πῦρ ἔχουσ' ἐφήμεροι;
ΠΡ. ἀφ' οὗ γε πολλὰς ἐκμαθήσονται τέχνας.
ΧΟ. τοιοῖσδε δή σε Ζεὺς ἐπ' αἰτιάμασιν,
αἰκίζεταί τε κοὐδαμῇ χαλᾷ κακῶν,
οὐδ' ἔστιν ἀθλοῦ τέρμα σοι προκείμενον;
ΠΡ. οὐκ ἄλλο γ' οὐδέν, πλὴν ὅταν κείνῳ δοκῇ.

ΧΟ. *δόξει δὲ πῶς; τίς ἐλπίς; οὐχ ὁρᾷς ὅτι*
ἥμαρτες; ὡς δ' ἥμαρτες οὔτ' ἐμοὶ λέγειν
καθ' ἡδονὴν σοί τ' ἄλγος. ἀλλὰ ταῦτα μὲν
μεθῶμεν, ἄθλων δ' ἔκλυσιν ζήτει τινά.

(C) ΧΟ. *ἡ σοφὸς ἢ σοφὸς ὃς* στρ.
πρῶτος ἐν γνώμᾳ τόδ' ἐβάστασε καὶ γλώσσᾳ
διεμυθολόγησεν,
ὡς τὸ κηδεῦσαι καθ' ἑαυτὸν ἀριστεύει μακρῷ·
καὶ μήτε τῶν πλούτῳ διαθρυπτομένων
μήτε τῶν γέννᾳ μεγαλυνομένων
ὄντα χερνήταν ἐραστεύσαι γάμων.
μήποτε πήποτέ μ' ὦ ἀντ.
τόνιαι Μοῖραι λεχέων Διὸς εὐνάτειραν ἴδοισθε
πέλουσαν·
μηδὲ πλαθείην γαμέτᾳ τινὶ τῶν ἐξ οὐρανοῦ.
ταρβῶ γὰρ ἀστεργάνορα παρθενίαν
εἰσορῶσ' Ἰοῦς μέγα δαπτομέναν
ὑνσπλάνοις Ἥρας πόνων.

(Be careful to give as exactly as you can the import of the particles used in the dialogue of ext. (C).

6. (*a*) Trace the rise of the Greek Drama, and say what share Æschylus and Sophocles had in its improvement. (*b*) Account for the choral element in it, and for the dialect in which it is written.

7. With what other plays was the Prometheus Vinctus connected, and what name was given to such combinations of plays?

8. (*a*) Give a scale of the feet admissible in Tragic Iambic Trimeter; and mention the restrictions under which the different feet come in? (*b*) Mark the scanning in the first four lines of ext. (C).

9. (*a*) Explain the formation of the *Attic Future*. (*b*) *μὴ οὐ γεγωίσκειν*:—Explain this usage of *μὴ οὐ*.

FIRST YEAR.

LATIN.—CICERO.—SELECT LETTERS.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

CICERO ATTICO SAL.

(A) Quod tibi superioribus litteris promiseram, fore ut opus exstaret

huius peregrinationis, nihil iam magno opere confirmo; sic enim sum complexus otium, ut ab eo divelli non queam; itaque aut libris me delecto quorum habeo Antii festivam copiam, aut fluctus numero—nam ad lacertas captandas tempestates non sunt idoneae—: a scribendo prorsus abhorret animus. Etenim γεωγραφικὰ, quae constitueram, magnum opus est: ita valde Eratosthenes, quem mihi proposueram, a Serapione et ab Hipparcho reprehenditur; quid censes, si Tyrannio accesserit? et hercule sunt res difficiles ad explicandum et ὁμοειδεῖς, nec tam possunt ἀνθηρογραφεῖσθαι, quamvidebantur, et, quod caput est, mihi quaevis satis iusta causa cessandi est, qui etiam dubitem an hic Antii considam et hoc tempus omne consumam, ubi quidem ego mallem duumvirum quam Romae fuisse. Tu vero sapientior Buthroti domum parasti. Sed, mihi crede, proxima est illi municipio haec Antiatium civitas: esse locum tam prope Romam, ubi multi sint, qui Vatinium numquam viderint? ubi nemo sit praeter me, qui quemquam ex viginţiviris vivum et salvum velit? ubi me interpellet nemo, diligant omnes?

TULLIUS TERENTIAE SUAE, TULLIOLAE SUAE, CICERONI SUO SALUTEM DICIT.

(B) Et litteris multorum et sermone omnium perfertur ad me, incredibilem tuam virtutem et fortitudinem esse teque nec animi neque corporis laboribus defatigari. Me miserum! te ista virtute, fide, probitate, humanitate in tantas aerumnas propter me incidisse! Tulliolamque nostram, ex quo patre tantas voluptates capiebat, ex eo tantos percipere luctus! nam quid ego de Cicerone dicam? qui cum primum sapere coepit, acerbissimos dolores miseriasque percepit. Quae si, tu ut scribis, fato facta putarem, ferrem paulo facilius, sed omnia sunt mea culpa commissa, qui ab iis me amari putabam, qui invidebant, eos non sequebar, qui petebant. Quod si nostris consiliis usi essemus neque apud nos tantum valuisset sermo aut stultorum amicorum aut inproborum, beatissimi viveremus: nunc, quoniam sperare nos amici iubent, dabo operam, ne mea valetudo tuo labori desit. Res quanta sit, intellego, quantoque fuerit facilius manere domi quam redire; sed tamen, si omnes tribunos pl. habemus, si Lentulum tam studiosum, quam videtur, si vero etiam Pompeium et Caesarem, non est desperandum.

2. (*a*) On what occasions were the above extracts severally written? (*b*) "Eratosthenes, Serapione, Hipparcho, Tyrannio, duumvirum, viginţiviris":—explain the references.

3. Explain the references in the following extracts:—(*a*) In Albanum montem hostias. (*b*) Togulam illam pictam. (*c*) Publicanos. (*d*) Cistophoro Pompeiano. (*e*) Archilochio edicto. (*f*) Ad tabulam Valeriam. (*g*) Nomenclatori.

4. Explain carefully the construction of the words in Italics:—(*a*) Spem *otii* ostendisti. (*b*) *Quibus* si non mutue *respondetur*. (*c*) *Buthroti* domum parasti. (*d*) *Legationes reiectum iri* puto. (*e*) *Anicato nullo loco* defui. (*f*) Quid *Tulliola mea* fiet? (*g*) Utinam ea res *ei voluptati sit*.

5. Parse the following :—Moveare, vererere, comperisse, delata sunt, abisset, prodesset, luxerunt, deliquisse, exegero, decesse, relaxaro, cogitaram.

6. Write down the *Nom. Sing.* and *Plu.* of :—loco, arbitratu, otii, jure, praesentibus, superficiem, dolori.

7. (*a*) Expand the following, and give the dates according to our method of reckoning :—(1) D. a. d. VI. K. Apr. (2) A. d. III. Non. Mart. (3) Idibus Sextilibus. (4) Pr. Kal. Mai. (5) In a. d. XV. Kal. Novembr. (*b*) Expand and explain, and state the approximate value of :—H.S. centiens. (*c*) Where were the following places :—Buthrotum, Dyrrachium, Thessalonica, Cyzicus, Stabianum.

8. (*a*) Decline :—Lepus, lepor (explain the formation of the Nominative), potus, unus, quis. (*b*) Write down the (1st sing) *Imperf. Subjunct.*, *Perf. Indic.*, *Fut. Indic.*, with the supine of :—rumpo, utor, fero, nitor. (*c*) State the fundamental distinction between the *Dative* and *Ablative*, and name their leading uses.

9. Translate into Latin :—

1. The next year, Lucius Cornelius Scipio, brother of the great Africanus, and Caius Laelius, the friend of the latter, were consuls. 2. Duilius was the first of the Romans to conquer in a naval battle. 3. Horatius slew his sister with his own hand. 4. He taught his sons justice, truth and temperance, virtues of the highest value. 5. Achilles was a man of very great strength and remarkable beauty. 6. After the expulsion of the kings, a new office was created at Rome, called the dictatorship, greater than the consulship. 7. Tarquin had reigned twenty-two years when he was driven from Rome. 8. Homer flourished before the founding of Rome; he was more skilled than Hesiod. 9. He said that his father was present; he said that his father would be present; he said that his father had been present. 10. Arria gave her husband a sword to kill himself with.

INTERMEDIATE EXAMINATION.

THURSDAY, APRIL 5TH :—MORNING, 9 TO 12.

LATIN.—CICERO.—DE IMPERIO CN. POMPEII.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate :—

(A) Maiores nostri saepe mercatoribus aut navicularis iniuriosius tractatis bella gesserunt : vos tot milibus civium Romanorum uno nuncio atque uno tempore necatis quo tandem animo esse debetis? Legati quod erant

appellati superbius, Corinthum patres vestri totius Graeciae lumen exstinctum esse voluerunt: vos eum regem inultum esse patiemini, qui legatum, populi Romani consularem vinculis ac verberibus atque omni supplicio excruciatum necavit? Illi libertatem imminutam civium Romanorum non tulerunt: vos ereptam vitam negligetis? Ius legationis verbo violatum illi persecuti sunt: vos legatum omni supplicio interfectum relinquetis? Videte ne, ut illis pulcherrimum fuit tantam vobis imperii gloriam tradere, sic vobis turpissimum sit, id quod accepistis, tueri et conservare non posse.

(B) Iam vero virtuti Cn. Pompeii quae potest oratio par inveniri? Quid est quod quisquam aut illo dignum aut vobis novum aut cuiquam inauditum possit adferre? Neque enim illae sunt solae virtutes imperatoriae quae vulgo existimantur, labor in negociis, fortitudo in periculis, industria in agendo, celeritas in conficiendo, consilium in providendo: quae tanta sunt in hoc uno, quanta in omnibus reliquis imperatoribus, quos aut vidimus aut audivimus, non fuerunt. Testis est Italia, quam ille ipse victor L. Sulla huius virtute et subsidio confessus est liberatam. Testis est Sicilia, quam multis undique cinctam periculis non terrore belli, sed consilii celeritate explicavit. Testis est Africa, quae magnis oppressa hostium copiis eorum ipsorum sanguine redundavit. Testis est Gallia, per quam legionibus nostris iter in Hispaniam Gallorum internicione patefactum est. Testis est Hispania, quae saepissime plurimos hostes ab hoc superatos prostratosque conspexit.

(C) Quid tam novum quam adolescentulum privatum exercitum difficili rei publicae tempore conficere? Confecit. Huic praeesse? Praefuit. Rem optime ductu suo gerere? Gessit. Quid tam praeter consuetudinem quam homini peradolescenti, cuius aetas a senatorio gradu longe abesset, imperium atque exercitum dari, Siciliam permitti atque Africam bellumque in ea provincia administrandum? Fuit in his provinciis singulari innocentia, gravitate, virtute: bellum in Africa maximum confecit, victorem exercitum deportavit. Quid vero tam inauditum quam equitem Romanum triumphare? At eam quoque rem populus Romanus non modo vidit, sed omnium etiam studio visendam et concelebrandam putavit. Quid tam inusitatum quam ut quum duo consules clarissimi fortissimique essent, eques Romanus ad bellum maximum formidolosissimumque pro consule mitteretur? Missus est. Quo quidem tempore, quum esset, non nemo in senatu qui diceret *non oportere mitti hominem privatum pro consule*, L. Philippus dixisse dicitur *non se illum sua sententia pro consule, sed pro consulibus mittere*. Tanta in eo rei publicae bene gerendae spes constituebatur, ut duorum consulum munus unius adolescentis virtuti committeretur.

2. (*a*) Explain the historical references of Ext. (A). (*b*) "Cujus aetas a senatorio gradu longe abesset":—What was his age? At what age was a man eligible for the *consulship?* What was the order of offices

leading to the consulship? (*c*) Comment on the points in which, according to Cicero, there was a departure in the case of Cn. Pompeius from law and precedent. (*d*) "Pro consulibus mittere" :— What was implied in this remark of Philippus?

3. Give an account of the chief sources whence the revenues of Rome were derived during the time of the Republic, and mention those which Cicero speaks of in this oration. Explain, also, the method of their collection.

4. (*a*) Write a sketch of the public life of Cn. Pompeius. (*b*) Give an account of the events in Asia and the occurrences at Rome that led to the delivery of this oration. Was the object of its delivery gained? (*c*) By what other title is the speech known, and for what reason?

5. Write explanatory or historical notes on :—(1) Rostra. (2) Propter dilationem comitiorum. (3) Vectigales et Stipendiarii. (4) Majores vestri cum Antiocho, cum Philippo, cum Ætolis, cum Pœnis bella gesserunt. (5) Civile, Africanum, Transalpinum, Hispaniense mixtum ex civitatibus, atque ex bellicosissimis nationibus, servile, navale bellum. (6) Vestrum jus beneficiumque defendam. (7) Neque praeter intercessionem audiam. (8) Sed etiam Appia via jam carebamus.

6. (*a*) Define the geographical position of :—Delos, duae Hispaniae, Achaia, Italiae duo maria, Sinopen atque Amisum. (*b*) What is meant specially by the term Asia, as employed by Cicero in this oration? Enumerate the countries included in its restricted sense.

7. (*a*) Parse the following words, giving the composition, or derivation, if any :—Praeesse, peradolescenti, permitti, deportavit, visendam, fieret. (*b*) Explain the grammatical structure in Ext. (C) of :— (1) Praeesse, (2) abesset, (3) gravitate, (4) triumphare, (5) mitteretur, (6) diceret.

8. (*a*) Distinguish :—gratiam or gratias habere; gratias agere; gratiam referre, and give corresponding Greek phrases. (*b*) In rendering from *direct* to *indirect* narration, what changes take place in Latin? (*c*) What are the rules for the sequence of Tenses in dependent interrogative sentenses and in oblique narration?

THIRD YEAR.

LATIN.—TERENCE.—ADELPHI.

TUESDAY, APRIL 10TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate into English :—

(A) Nam qui mentiri aut fallere insuerit patrem,
Fraudare tanto magis audebit ceteros.

Pudore et liberalitate liberos
Retinere satius esse credo quam metu.
Haec fratri mecum non conueniunt neque placent.
Venit ad me saepe clamans 'quid agis, Micio?
Quor perdis adulescentem nobis? quor amat?
Quor potat? quor tu his rebus sumptum suggeris?
Vestitu nimio indulges: nimium ineptus es.'
Nimium ipsest durus praeter aequomque et bonum:
Et errat longe mea quidem sententia,
Qui inperium credat grauius esse aut stabilius,
Vi quod fit, quam illud quod amicitia adiungitur.
Mea sic est ratio et sic animum induco meum:
Malo coactus qui suom officium facit,
Dum id rescitum iri credit, tantisper pauet:
Si sperat fore clam, rursum ad ingenium redit.
Ille quem beneficio adiungas ex animo facit,
Studet par referre, praesens absensque idem erit.

(B) Sy. Labascit. unum hoc habeo: uide si satis placet:
Potius quam uenias in periclum, Sannio,
Seruesne an perdas totum, diuiduom face.
Minas decem conradet alicunde. Sa. Ei mihi,
Etiam de sorte nunc uenio in dubium miser?
Pudet nil? omnis dentis labefecit mihi:
Praeterea colaphis tuber est totum caput:
Etiam insuper defrudet? nusquam abeo. Sy. Vt lubet:
Numquid uis quin abeam? Sa. Immo hercle hoc quaeso, Syre,
Vt ut haec sunt acta, potius quam litis sequar,
Meum mihi reddatur, saltem quanti emptast, Syre.
Scio te non usum antehac amicitia mea:
Memorem me dices esse et gratum. Sy. Sedulo
Faciam. sed Ctesiphonem uideo: laetus est
De amica. Sa. Quid quod te oro? Sy. Paulisper mane.

(C) Ge. Era, lacrumas mitte ac potius quod ad hanc rem opus est porro prospice:
Patiamurne an narremus quoipiam? Ca. Au au, mi homo, sanun es?
An hoc proferendum tibi uidetur usquam? Ge. Mihi quidem hau placet.
Iam primum illum alieno animo a nobis esse res ipsa indicat.
Nunc si hoc palam proferimus, ille infitias ibit, sat scio:
Tua fama et gnatae uita in dubium ueniet. tum si maxume
Fateatur, quom amet aliam, non est utile hanc illi dari.
Quapropter quoquo pacto tacitost opus. So. Ah minume gentium:
Non faciam. Ge. Quid ages? So. Proferam. Ca. Hem, mea Sostrata, uide quam rem agas.

2. Write explanatory (grammatical) notes on the following :—(*a*) Quor perdis adolescentem *nobis?* (*b*) *Vestitu nimio* indulges. (*c*) *Hoc* pater ac dominus interest. (*d*) Numquid vis quin abeam? (*e*) Alii clanculum patres quae faciunt. (*f*) Quem neque pudet *quicquam.* (*g*) Haec quum *illi*, Micio, dico *tibi* dico. (*h*) Mihi ne corrumpantur *cautio* est.

3. Translate and explain the following extracts :—(*a*) Acta ludis funebribus Æmili Paulli. (*b*) Modos fecit L. Flaccus Claudi tibiis sarranis. (*c*) Facta e Graeca Menandru. (*d*) Ego meum jus persequar. (*e*) Nam ego liberali causa illam assero manu. (*f*) Frustra egomet has mecum rationes puto.

4. (*a*) Parse the forms faxo, faxim, and faxem, and explain their formation. (*b*) Parse the following :—reprensum, alserit, insuerit, tradier, refrixerit, permanet, es, defunctum. (*c*) Write out in full the following contractions :—sis, exporge, demsi, produxe, cedo (*imper.*), lautum, enarramus, siit, norimus, scisse.

5. (*a*) Write down the equivalents of the following according to the common orthography :—Quor, hauscio, nunciam, ipsus, erus, quoipiam, quoiuis, edepol. (*b*) Explain the formation of :—Illic, ilico, ellum, istoc, quí, ubi.

6. Give the meaning as exactly as you can, and explain the etymology of :—sedulo, obsonat, debacchatus, colaphos, mussitanda, scrupulum, articulo, saltem, ultro, porro.

7. (*a*) Name the metre of ext. (A), and write down the scale of it, and point out in what respects it differs from the same metre of the Greek dramatists. (*b*) Scan the first four verses of the same ext.

8. (*a*) Distinguish between :—*foris crepuit* and *fores pultavit. E re nata* and *pro re nata.* (*b*) Give the meanings of the Singular and Plural of :—*carcer, copia, rostrum, littera, sal, impedimentum, aedes, auxilium.* (*c*) Write down the Genitive Plural of :—*poema, bos, lis, ordo, mas.* (*d*) Give the Comparative and Superlative of :—*nequam, frugi, intra, prope, ultra, diu.*

9. A sketch of the life of Terence.

B.A. ORDINARY EXAMINATION.

TUESDAY, APRIL 10TH :—MORNING, 9 TO 12.

LATIN.—{ TACITUS.—ANNALS, BOOK II.
JUVENAL.—SATIRES, VIII. AND X.

Examiners, ... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate :—

(A) Eodem anno mancipii unius audacia, ni mature subventum foret, discordiis armisque civilibus rem publicam perculisset. Postumi Agrippæ

servus, nomine Clemens, comperto fine Augusti, pergere in insulam Planasiam, et fraude aut vi raptum Agrippam ferre ad exercitus Germanicos non servili animo concepit. Ausa ejus inpedivit tarditas onerariæ navis ; atque interim patrata cæde, ad majora et magis præcipitia conversus furatur cineres, vectusque Cosam Etruriæ promontorium ignotis locis sese abdit, donec crinem barbamque promitteret : nam ætate et forma haud dissimili in dominum erat. Tum per idoneos et secreti ejus socios crebrescit vivere Agrippam, occultis primum sermonibus, ut vetita solent, mox vago rumore apud inperitissimi cujusque promptas aures, aut rursum apud turbidos eoque nova cupientes. Atque ipse adire municipia obscuro diei, neque propalam aspici, neque diutius isdem locis, sed quia veritas visu et mora, falsa festinatione et incertis valescunt, relinquebat famam aut præveniebat.

(B) Cæsar paulisper ad spem erectus, dein fesso corpore, ubi finis aderat, adsistentes amicos in hunc modum alloquitur :—" Si fato concederem, justus mihi dolor etiam adversus deos esset, quod me parentibus, liberis, patriæ, intra juventam præmaturo exitu raperent. Nunc scelere Pisonis et Plancinae interceptus ultimas preces pectoribus vestris relinquo : referatis patri ac fratri, quibus acerbitatibus dilaceratus, quibus insidiis circumventus miserrimam vitam pessima morte finierim. Si quos spes meæ, s quos propinquus sanguis, etiam quos invidia erga viventem movebat, illacrimabunt quondam florentem, et tot bellorum superstitem, muliebri fraude cecidisse. Erit vobis locus querendi apud senatum, invocandi leges. Non hoc præcipuum amicorum munus est, prosequi defunctum ignavo questu, sed quae voluerit, meminisse, quæ mandaverit, exsequi. Flebunt Germanicum etiam ignoti : vindicabitis vos, si me potius quam fortunam meam fovebatis. Ostendite populo Romano divi Augusti neptem, eandemque conjugem meam ; numerate sex liberos. Misericordia cum accusantibus erit ; fingentibusque scelesta mandata aut non credent homines, aut non ignoscent." Juravere amici, dextram morientis contingentes, spiritum ante quam ultionem amissuros. Tum ad uxorem versus per memoriam sui, per communes liberos oravit, exueret ferociam, sævienti fortunæ submitteret animum, neu regressa in urbem æmulatione potentiæ validiores irritaret.

2. Turn the first three sentences of the speech of Germanicus in Ext. (B) into the *Oratio obliqua*, and state the rules for so doing.

3. Write explanatory notes on the following :—(*a*) Funus sinei maginibus et pompa. (*b*) Saliari carmine. (*c*) Flamen aut augur. (*d*) Suscepto justitio. (*e*) Carmina et devotiones. (*f*) Ovantes urbem introirent. (*g*) Areo judicio. (*h*) Distinctos senatus et equitum census. (*i*) Vestis serica. (*k*) E numero primipilarum.

4. Define the geographical positions of the following, and give modern names where you can :—Parthi, Dahas, Insula Batavorum, Amisia, Visurgis, Rubrum mare, Insula Planasia, Magnetas a Sipylo.

5. (*a*) Sketch the life of Tacitus, enumerate his works, and give the leading peculiarities of his style. (*b*) State the period of time embraced, with dates, and the leading characters described, in the II. Book of the Annals.

6. Translate:—

(C) Dic mihi, Teucrorum proles, animalia muta
Quis generosa putet, nisi fortia? nempe volucrem
Sic laudamus equum, facili cui plurima palma
Fervet et exsultat rauco victoria Circo.
Nobilis hic, quocunque venit de gramine, cujus
Clara fuga ante alios et primus in æquore pulvis:
Sed venale pecus Corythæ posteritas et
Hirpini, si rara jugo victoria sedit.
Nil ibi majorum respectus, gratia nulla
Umbrarum: dominos pretiis mutare jubentur
Exiguis, trito ducunt epirhedia collo
Segnipedes, dignique molam versare Nepotis.
Ergo ut miremur te, non tua, primum aliquid da,
Quod possim titulis incidere, præter honores,
Quos illis damus et dedimus, quibus omnia debes.

(D) Eloquium ac famam Demosthenis aut Ciceronis
Incipit optare et totis Quinquatribus optat,
Quisquis adhuc uno partam colit asse Minervam,
Quem sequitur custos angustæ vernula capsæ.
Eloquio sed uterque perit orator; utrumque
Largus et exundans leto dedit ingenii fons.
Ingenio manus est et cervix cæsa; nec unquam
Sanguine causidici maduerunt rostra pusilli.
"O fortunatam natam me Consule Romam!"
Antoni gladios potuit contemnere, si sic
Omnia dixisset. Ridenda poemata malo,
Quam te conspicuæ, divina Philippica, famæ,
Volveris a prima quæ proxima. Sævus et illum
Exitus eripuit, quem mirabantur Athenæ
Torrentem et pleni moderantem fræna theatri.
Dis ille adversis genitus fatoque sinistro,
Quem pater, ardentis massæ fuligine lippus,
A carbone et forcipibus gladiosque parante
Incude et luteo Vulcano ad rhetora misit.

7. (*a*) Note varieties of reading in Extracts (C) and (D). (*b*) Criticise the reference to Demosthenes in Extract (D). (*c*) "Ridenda poemata;" "divina Philippica":—explain. (*d*) What does Juvenal censure in the vs. cited from Cicero?

8. Write explanatory notes on:—(*a*) Alto Drusorum Stemmate. (*b*) Sanguine Iuli. (*c*) Cecropides. (*d*) Plebe togata. (*e*) Hermæ. (*f*) Quinquatribus. (*g*) Quisquis adhuc uno partam colit asse Minervam.

9. Explain the construction of:—(*a*) Longo sanguine censeri. (*b*) Humeros—humero—carentem. (*c*) Tamquam feceris ipse aliquid ut te conciperet quæ sanguine fulget Iuli. (*d*) Dignus morte perit. (*e*) Vacuis exsucta medullis. (*f*) Maturus bello Armeniæ Syriæque tuendis amnibus. (*g*) Repulsa—repulsâ—repulso—nec minus excanduit.

FIRST YEAR.

HISTORY.—HISTORY OF GREECE AND ROME.

THURSDAY, APRIL 5th :—AFTERNOON, 2 TO 4.

Examiner,..... .... REV. GEORGE CORNISH, LL.D.

1. (*a*) Name and describe the two gulfs north of Central Greece. (*b*) Name the countries on the west of Central Greece. (*c*) Define the position of Eubœa. (*d*) Give the derivation and meaning of the names *Peloponessus*, *Cyclades*, *Sporades*.

2. What was the age, and what the chief scenes, of Greek colonization?

3. What were the ties that tended to unite the various tribes of Hellas?

4. (*a*) An account of the political and social institutions of the Spartans. (*b*) Explain the terms *Perioeci*, *Helots*, and *Neodamodes*.

5. A short account of the rule of Peisistratus, and of the legislation of Cleisthenes, at Athens.

6. Write short historical notes, with dates, on any four of the following :—(1) Ladé, (2) Marathon, (3) Ægina, (4) Salamis, (5) Platæa, (6) Eurymedon, (7) Corcyra, (8) Sphacteria, (9) Syracuse, (10) Ægospotami.

7. Give a general account of ancient Italy and its inhabitants.

8. State the leading features of the domestic, social, and religious life of the Romans, at the time of the establishment of the Republic.

9. What events led to the creation of the first Decemvirate? What were its objects, functions, and results?

10. Comment on the general results, to Rome and Carthage, severally, of the First Punic War.

INTERMEDIATE EXAMINATION.

THURSDAY, APRIL 5TH :—AFTERNOON, 2 TO 5.

LATIN PROSE COMPOSITION.

Examiners,..... ..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, M.A.

Translate into Latin :—

(A) Alexander the Great, as he was returning to Babylon, was met by cer-

tain Chaldæan prophets who warned him not to enter the city; for, if he went, his life would be in danger. We know, however, that, despising their counsel, he proceeded on his way, being informed that ambassadors from all parts of the world had crowded to Babylon, and were waiting his arrival. A few days after he reached the city, he was invited to a feast by Thessalus, a physician; and it is said that he died in consequence of poison given him at that entertainment. A little before his death, when his voice had now begun to fail, his friends asking him to whom he left his kingdom, he replied, "to the bravest."

(B) Postumius was successful in his operations against the Æqui and the Volsci, who had revolted from the Romans; but stained the victory with the blood of his son, whom he beheaded for having engaged with the enemy contrary to his orders. Camillus likewise vanquished the Falisci, and that not so much by the arms of his soldiers, as by his own personal integrity. But after so many and so great achievements, the Roman name was in danger of being effaced by the Gauls, who marched to the city with a hostile army and put the Romans to flight, at the first attack on the river Allia. Afterwards they took and burned the city, and besieged the Capitol, to which the flower of the Roman youth had retreated.

THIRD YEAR.

LATIN PROSE COMPOSITION.

TUESDAY, APRIL 10TH:—AFTERNOON, 2 TO 4.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

Translate into Latin:—

But Ascanius the son of Æneas, who was also called Iulus, left the town of Lavinium after thirty years, and built a new city, high on the hill near a deep lake; and he called the town Alba Longa, and there he and his descendants reigned three hundred years over the whole country of the Latins from the mountains to the sea, and all the Latin towns were subject to Alba. There were thirty of them, and Alba was the chief town of the league, and upon the summit of the Alban hill they built a temple to Jupiter Latiaris, for thus King Latinus was called after his death when he had become a god. In this temple, the thirty Latin towns offered an annual sacrifice and celebrated games in honour of the god. But the sacred relics of Troy, which Æneas had rescued, remained still in Lavinium, the first place in Latium where they were worshipped; and whenever they were carried away from it to Alba Longa, they returned of their own accord to Lavinium in the night. So Lavinium remained a sacred town among the Latins, and the priests offered up yearly sacrifices for the whole of Latium in the sanctuaries of the Penates and the Lares, the tutelary gods of the Latin race.

B. A. ORDINARY EXAMINATION.

MONDAY, APRIL 9TH:—AFTERNOON, 2 TO 4.

LATIN PROSE COMPOSITION.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

Translate into Latin:—

Titus Manlius being informed that his father had been appointed to stand his trial, went by night to the house of the accuser, and having obtained a private interview with him, drew a small dagger, and by the menace of immediate death extorted from him an oath to drop the prosecution. He soon after distinguished himself in war by slaying in single combat a Gallic chief of incredible stature, which so dismayed the enemy that, judging of the rest of the Roman soldiers from him, they threw down arms and retreated with all possible speed into their own country. It was on this occasion that Manlius obtained the surname of Torquatus, having adorned himself with the gold collar worn by his antagonist. His great merit procured him the signal honour of being twice nominated dictator before he had filled the office of consul, but on his resigning the dictatorship the second time, the consulship was conferred on him. Having marched with Decius Mus to suppress a dangerous rebellion of the Latin States, he issued a decree prohibiting any soldier to quit the ranks or fight without permission from the Commander. His own son was the first to infringe the order, having been challenged by a Latin chief to single combat, and the inexorable consul made him be put to death. This severity he found was displeasing to most, and when afterwards offered the censorship by the Senate he declined, saying that as the people could not endure his rigour, so he could not bear their licentiousness.

B. A. ORDINARY EXAMINATION.

TUESDAY, APRIL 10TH:—AFTERNOON, 2 TO 4.

GENERAL PAPER.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Discuss the general results of the Persian wars to Athens and Sparta, and their connection with the Peloponnesian War.

2. What were the immediate causes, real and ostensible, of the Peloponnesian War?

3. Give your estimate of the personal character and public policy of Pericles.

4. Give an account of the general character of the events of the first ten years of the Peloponnesian War.

5. Alcibiades ;—his character, conduct, and career.

6. What were the consequences of the failure of the Sicilian Expedition?

7. Give the names of the second Triumvirate at Rome; state how long it lasted and the causes that led to its dissolution.

8. Give an account of the reign of Augustus. What circumstances favoured him in the assumption and consolidation of the Imperial power?

9. Define the limits of the Roman Empire at the time of the accession of Tiberius.

THIRD YEAR EXAMINATION FOR HONOURS.

GREEK.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts, adding an explanatory note where you deem it necessary:—

(A) Pindar, Olympia, VII., vss. 1–35.
(B) Aristophanes, The Frogs, (*a*) vss. 590–604. (*b*) vss. 716737.
(C) Herodotus, Bk. VIII., chap. 68.
(D) Xenophon, Hellenics, Book II., chap. II., §§. 1–4.

2. (*a*) Describe the custom referred to at the beginning of ext. (A), explaining the phrase *οἰκοθεν οἰκαδε*. (*b*) Derive and explain the words:—*καχλάζοισαν, κορυφάν, ζωθάλμιος, ἀποινα, ξυνόν, ἀκλάρωτον, χρυσάμπυκα, σκυτάλα*. (*c*) Parse the following, and give the Attic equivalent of each:—*κατέβαν, ἀδόντα, φρασίν, αἰθοίσας, φαντί, ϑέμεν, παρφάμεν, ἐᾷ, πετοῖσαι, δίδοι*. (*d*) An account of Pindar and of his poetry.

3. (*a*) Name and give the schemes of the metres severally used in extt. (A) and (B) from Aristophanes, and scan the first three vss. of each ext. (*b*) At what date, and amid what political events at Athens, was this play brought out. (*c*) Point out the leading characteristics of Aristophanes as a dramatic poet.

4. Write explanatory notes, grammatical or other, as may be required, on the following extracts from The Frogs:—(*a*) *υἱὸς Σταμνίου.* (*b*) *ὁ παῖς* (vs. 40), explain the use of the Nominative. (*c*) *ἡλίκος Μόλων.* (*d*) *δύ' ὀβολὰ μισθὸν λαβών.* (*e*) *τῷ ξυνέτυχον*; (Illustrate from the Prometh. Vinctus). (*f*) *οὐκ φράτερας.* (*g*) *κεκωδωνισμένοις.* (*h*) *προυσελοῦμεν.* Explain the formation.

5. (*a*) Give the names, with dates, of the Greek comedians who succeeded Aristophanes. (*b*) Give Donaldson's classification of Greek plays, with the substance of his remarks on the origin of Comedy and Tragedy among the Greeks. *c*) Give also the etymology of the terms *τραγῳδία* and *κωμῳδία.*

6. Comment on the relationship or connection in respect of chronology and subject-matter between Herodotus, Thucydides and Xenophon in their treatment of Grecian affairs.

7. Explain the following, pointing out the general principles which regulate the conjunction of cases with verbs:—*λέγειν λόγον, ἀκούειν λόγου, ἥδεσθαι λόγῳ, μεμνῆσθαι λόγου, θνητοῖσιν ἀνάσσειν, ὅπλοις χρῆσθαι.*

LATIN.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it necessary, the following passages:—

(A) Livy, Bk. XXI., chap. xlvii.
(B) Cicero, De Imp. Cn. Pompeii, chap. viii.
(C) Juvenal, (*a*) Sat. VIII., vss. 245-258. (*b*) Sat. X., vss. 346-366.
(D) Terence, Adelphi, Act IV., sc. iv.

2. (*a*) Ext. (A) "Hoc primum proelium":—Give the name and date of this battle, and describe as accurately and minutely as you can the locality in which it took place. (*b*) "Equitatu meliorem Poenum esse":—Comment on the numbers and composition of Hannibal's army at this date and point out in what respects it was superior to the Roman army. (*c*) Write explanatory notes on the following expressions from Livy:—(1) Praerogativam militarem. (2) Agmine quadrato. (3) Occidente jam sidere Vergiliarum. (4) Nummis aureis. (5) Lectisternium. (6) Latinarum feriarum. (7) Sortes extenuatas. (8) Foro olitorio. What other *fora* were there at Rome?

3. (*a*) Narrate briefly the events antecedent to the delivery of the oration De Imp. Cn. Pomp. (*b*) Point out instances in which Cicero, in order to enforce his argument, has indulged in oratorical exaggeration in this speech. In what respects may it be regarded as a good specimen of Cicero's oratory? (*c*) Point out various readings in ext. (B), and show how these arise in Mss. (*d*) Explain the meaning of:—(1) Centuriis cunctis. (2) Vectigalia. (3) Socii. (4) Decumae. (5) Scriptura. (6) Saltibus (cap. vi.; what other readings and conjectures?).

4. Ext. (C). (*a*) *Dolabra*:—Describe, and distinguish it from the *securis* What was the equipment of the legionarius over and above his offensive and defensive armour? (*b*) "Frangebat vertice vitem":—Can you cite a passage from Tacitus in illustration of this? (*c*) Explain the historical references of ext. (A) from Juvenal. (*d*) Explain (grammatically) the following, pointing out instances of enallage or ellipsis:—(1) Vacuis exsucta medullis, v. 90. (2) Quo mihi te? v. 142. (3) Tuis natalibus, v. 231. (4) Laxabant, v. 261. (5) Legum prima securis. (6) Ingenio * * caesa, X., v. 120. (7) Ut primos edere planctus Cassandra inciperet. (8) Repulsa—repulsâ—repulso excanduit, v. 326. (*e*) Note peculiarities of metre:—

"Confisus periit admirandusque lacertis.'
"Ergo supervacua aut perniciosa petuntur."
"Bellorum pompa animam exhalasset opimam."

5. (*a*) Name, and give the scheme of, the metres of vss. 1, 3, 7, 8, respectively, of ext. (D), and scan the same. (*b*) Distinguish between faciam and agam; metu and terrore. (*c*) Explain the forms:—ain, dic, sodes, prorsum, noctu, es, potin, pultare, actutum.

6. The origin of the Roman Comic Drama.

GREEK AND LATIN PROSE COMPOSITION.

FRIDAY, APRIL 20TH:—AFTERNOON, 2 TO 5.

Examiner,..... REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek (accented):—

I went down yesterday to the Peiræus with Glaucon. We had finished our prayers, and satisfied our curiosity, and were returning to the city, when Polemarchus caught sight of us at a distance, and told his servant to run and bid us wait for him. The servant came behind me, and took hold of my cloak, and said, "Polemarchus bids you wait." I turned round and asked him where his master was. "There he is," he replied, "coming on behind; pray wait for him." "We will wait," answered Glaucon. Soon afterwards Polemarchus came up, with Adeimantus the brother of Glaucon, and Niceratus the son of Nicias, and a few other persons, apparently coming away from the procession.

(B) Translate into Latin :—

The genius being moved with compassion towards me, bid me quit so uncomfortable a prospect. "Look no more," said he, "on man in the first stage of his existence, in his setting out for eternity; but cast thine eyes on that thick mist into which the tide bears the several generations of mortals that fall into it." I directed my sight as I was ordered, and (whether or no the good genius strengthened it with any supernatural force or dissipated part of the mist that was before too thick for the eye to penetrate) I saw the valley opening at the farther end, and spreading forth into an immense ocean, that had a huge rock of adamant running through the midst of it, and dividing it into two equal parts. The clouds still rested on one half of it, insomuch that I could discover nothing in it; but the other appeared to me a vast ocean planted with innumerable islands, that were covered with fruits and flowers, and interwoven with a thousand little shining seas that ran among them. I could see persons dressed in glorious habits with garlands upon their heads, passing among the trees, lying down by the sides of fountains, or resting on beds of flowers; and could hear a confused harmony of singing birds, falling waters, human voices, and musical instruments. Gladness grew in me upon the discovery of so delightful a scene. I wished for the wings of an eagle that I might fly away to those happy seats; but the genius told me there was no passage to them, except through the gates of death that I saw opening every moment upon the bridge. "The islands," said he, "that lie so fresh and green before thee, and with which the whole face of the ocean appears spotted as far as thou canst see, are more in number than the sands on the sea shore; there are myriads of islands behind those which thou here discoverest, reaching further than thine eye, or even thine imagination can extend itself."

GREEK AND ROMAN HISTORY.

MONDAY, APRIL 23RD:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. (*a*) Give the Latin equivalents in use among the Romans of the following names of Greek deities:—Zeus, Here, Poseidon, Athene, Eos, Hestia, Leto, Demeter, Hades, Ares. (*b*) The legend of Deukalion, Hellen, and the sons of Hellen. (*c*) Give the substance of Grote's remarks on Grecian Mythology. (*d*) What was the original meaning of the word *mythus*?

2. Give an account of the state of society and manners as exhibited in the legendary poems of Greece.

3. A general survey of the Hellenic people in the early historical times

4. The political condition of Attica before the time of Solon.

5. With what non-Hellenic races were the Greeks brought into contact, in Asia Minor and elsewhere, and how were they affected thereby in respect of commerce, civilization, and artistic cult ure?

6. "Philological research teaches us to distinguish three primitive Italian stocks," Mommsen):—Name these stocks, and give an account of the earliest inhabitants of Italy. Which of these three stocks became the dominant race of Italy?

7. State the leading features of the original political and social constitu. tion of Rome.

8. Give the substance of Mommsen's account of the Etruscans.

9. Greek colonization in Italy.

10. The political position of Rome in relation to the peoples of Italy and foreign nations at the beginning of the first Punic War.

B. A. EXAMINATION FOR HONOURS.

LATIN PROSE WRITERS.

FRIDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,..... ....REV. GEORGE CORNISH, LL.D

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it :—

(A) Tacitus, Annals, Book II., chap. xlvi.

2. Write explanatory notes, grammatical or otherwise, as the case may be, on the following:—(*a*) Vacuas legiones. (*b*) Transfugiis nudatus. (*c*) Missus paci firmator. (*d*) Aegypto remeans. (*e*) Proficisitur cognoscendae antiquitatis. (*f*) Laetus animi. (*g*) Idistaviso. (*h*) Egressus augurali.

3. Translate :—

(B) Tacitus, Histories I., chaps. lxi.-lxii.

4. Ext. (B) :—(1) Give the date of the events here recorded, and name the Emperors that occupied the throne that same year. (2) 'Cottianis Alpibus, Poeninis jugis';—define the positions and give modern names. Also those of Lugdunenses, Viennenses, Lucus, Vercellai. (3) Chap. lxxix., Histt. I.—'Sarmatiea gens' :—who and where did they dwell? (4) Ib. 'Romanus miles * * * lorica missili pilo, aut lanceis, levi

gladio ;—describe the equipment of the *legionarius*, and carefully explain the above terms, pointing out to what class of troops *lanceis* applies.

5. Translate :—

(C) Livy, Book XXII., chap. xlvii.

6. Ext. (C) :—(1) Acrius tamen quam diutius ;—give the import of the comparatives. (2) Give the date and locality of the battle here described. Was it followed by any important consequences ? (3) A short account of Livy as a historian ;—to what extent may his story of the campaigns of Hannibal be regarded as trustworthy or the opposite, and why ?

7. Translate :—

(D) Cicero :—De Officiis, Book II., Chap. viii., §§ 28 and 29, down to *putare singuli.*

8. (*a*) "Ex ea urbe triumphari ;" "Ex Transalpinis bellis triumpharunt" :—Distinguish, and give the import of the preposition in each expression Explain the special historical events to which Cicero refers in this ext. (*b*) "Audientem Cratippum idque Athenis" :—Write a short account of Cratippus, and of the literary and educational position of Athens at this time. (*c*) When and why did Cicero write this treatise ?

9. Translate :—

(E) Cicero, De Imp. Cn. Pomp. chap. xxiv., §§ 69-70.

10. To what extent is the character which Cicero in this oration gives to Pompey borne out by his public and private life ?

LATIN POETS.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you may deem it necessary on any peculiar form or construction :—

(A) Plautus :—Aulularia, Act IV., scc. 8 and 9.

(B) Terence :—Adelphi, Act IV., sc. 5, vss. 1-25.

2. (*a*) Discrucior *animi; animo* male est; *cum animo* investigare :—Explain these usages severally. (*b*) *Pices* divitiis :—What is the allusion, and what other reading is there ? (*c*) Vestitu et creta; Huic leges cogunt nubere hanc ;—explain. (*d*) Name the metre employed in the above extracts and scan the first five vss. of ext. (A).

3 (*a*) Explain the force of the prepositions in the following :—*Aul.*—Prol. 2, ex hac familia ; ib. 21, ex se ; I., 3, 40, in viros ; II., 1, 33, in rem ; ib.

2, 8, a pecunia; III., 2, 6, de industria. (*b*) Point out peculiarities of Syntax in Plautus and Terence, as compared with the usages of the Augustan writers. (*c*) Give the etymology and exact meaning of the following words from Terence:—Prolubium, frugi, propediem, villi, comissatorem, mastigia, parasitaster, silicernium.

4. Translate:—

(C) Juvenal, Sat. X., vss. 168-187.

5. White short historical explanatory notes on:—(*a* Pellaeo juveni. (*b*, Clausus Gyari parvaque Seripho. (*c*) A figulis munitam. (*d*) Velificatus Athos * * Graecia mendax. (*e*) Senecae praedivitis. (*f*) Lateranorum aedes. (*g*) Calcemus Caesaris hostem.

6. Translate:—

(D) Persius:—Sat. V., vss. 30-51.

(E) Horace:—Satt., Book I., Sat. VI., vss. 71-89.

(*a*) An account of the person to whom this satire of Persius is addressed (*b*) "Non equidem dubites":—Note and explain the peculiarity. Explain also the following from Persius:—(1) Hortante *Camena*. (2) *Succinctis* Laribus. (3) Fruge *Cleanthea*. (4) *Exossatus* ager. (5) *Varo* producis *Genio* (*c*) Cite from other parts of Horace's writings references to his birth, education, and social position at Rome.

7. Translate Virgil:—

(F) Æneid, Book IV., vss. 648-674.

8. Comment on the Æneid in respect of its language, subject-matter and style of treatment, and point out what you consider to be the excellences and defects of Virgil.

GREEK POETS.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D

1. Translate, with an explanatory note when you deem it necessary:—

(A) Pindar, Olympia, IX., vss. 32-71.

2. (*a*) On what occasion was this Ode written, and where was it sung? (*b*) Give an account of the life and character of Pindar as a poet, referring especially to his practice of writing epinician odes. (*c*) Comment on and explain the following:—(1) *καλλίνικος ὁ τρίπλοος*.

(2) κωμάζοντι. (3) χαμαιπετέων. (4) στεφάνων ἀωτοι. (5) ὑποκρέκει. (6) πανάγυριν Λυκαίου. (*d*) Describe the dialect used by Pindar.

3. Translate:—

(B) Sophocles, Antigone, vss. 781–805.

4. (*a*) Distribute ext. (B) into *strophe*, *antistrophe*, and *systema*, and explain the meaning of these terms. (*b*) Name the metres used in the strophe and systema, and scan these parts. (*c*) Explain grammatically:—(*a*) νῷν ἐτι ζώσαιν, vs. 3. (*b*) τῶν ἐχθρῶν κακά, vs. 10. (*c*) μῦθος φίλων, vs. 11. (*d*) εἴτ' ἐσθλῶν κακή, vs. 38. (*e*) Give the various readings and interpretations of vs. 71.

5. Translate:—

(C) Æschylus, Seven against Thebes, vs. 422436.

(D) Euripides, Hippolytus, vss. 311-331.

(E) Aristophanes, The Frogs, vss. 684-705.

6. (*a*) Give the scheme of the metre and scan the first four vss. of ext. (E). (*b*) By what term was that part of the play from which the above ext. is taken designated? (*c*) Explain the following references and expressions:—(1) ἐξισωσῶσαι τοὺς πολίτας. (2) Φρυνίχου παλαίσμασιν. (3) Πλαταιᾶς εἶναι. (4) ὁ πονηρότατος βαλανεύς. (5) μεταγωγήσουσι. (*d*) At what date was this play brought out?

7. How does Aristophanes characterize the Seven against Thebes? How may the popularity of this drama in ancient and later times be accounted for? By what other Dramatists, and in what plays, has the subject of the expedition of Polynices against Thebes, and the events consequent thereupon, been treated?

8. Tranlate:

(F) Theocritus, Idyl V., vss. 80-101.

(G) Hesiod, Works and Days, vss. 491-509.

9. Parse, and give Attic equivalents of the following from Pindar and Theocritus:—ἐπικκύρσαις, γεγάκειν, δαέντι, μάσσονα, ἄπνεν, κεινός, θᾶσαι, μέσφα, τώς, τῶ.

10. Write etymological notes on:—ἐπαλέα, λέσχην, λεπτῇ, δυσηλεγέες, τροχαλόν, ἔκητι, ἅπλατοι—ἄπληστοι—ἄπλαστοι (147), ἄρειον.

GREEK PROSE WRITERS.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it necessary, the following extracts:—

(A) Aristotle, De Poetica, Chap. vi. §§ 7–11, inclusive.

2. (*a*) Give an account of the state of the text of this Treatise, and name the principal editors and commentators of the same. (*b*) Distinguish between *genuineness* and *authenticity* as applied to literary criticism. Summarise the arguments in favour of the genuineness of this treatise, stating incidentally the theories that have been propounded concerning it. (*c*) *Μάλιστα γὰρ λεκτικὸν τῶν μέτρων τὸ ἰαμβεῖον. ἐστι.* Explain and examine this statement. (*d*) Derive and explain the terms :—*διθύραμβος, ἐποποιία, ἰαμβεῖον, ἐπεισόδιον.*

3. Translate :—

(B) Plato, De Republica, Book I., Chap. xxii., down to *οὐσα ἄδικος*.

4. A general account of the Republic of Plato and of the purpose with which it was written.

5. Translate :—

(C) Herodotus, Book VIII., chap. cxxx.

6. Comment historically or grammatically, as may be required, in explanation of the following phrases from Herod. Bk. VIII. (*a*) VIII 3 ;—*πρόφασιν τὴν Παυσανίεω ὕβριν * * * τοὺς Λακεδαιμονίους.* (*b*) ib. 5; *πληγέντες δώροισι.* (*c*) ib. 6 ; *μηδὲ πυρφόρον περιγενέσθαι.* (*d*) ib. 10 ; *ὅσοισι δὲ καὶ ἡδομένοισι τὸ γινόμενον.* (*e*) ib. 21 ; *παλήσειε.* (*f*) ib. 23 ; *ἡλίῳ σκιδναμένῳ.* (Illustrate from an English poet). (*g*) ib. 41 ; *ὡς τῆς θεοῦ ἀπολελοιπυίης τὴν ἀκρόπολιν.* (Illustrate from the Septem contra Theb. and from the Æneid).

7. Translate :—

(D) Thucydides Bk. I., chap. lxxxvii.

(E) Xenophon, Hellenics, Bk. II. chap. iv., § 8–10, inclusive.

8. Ext. D (*a*) *ὁ δέ* :—What is the force of *δέ*? If antithetical, where is the antithesis? (*b*) *ἀναστήτω ἐς ἐκεῖνο τὸ χωρίον* :—Explain. (*c*) *δοκοῖεν, βούλεσθαι* :—Construe. (*d*) *ποιῶνται* :—What peculiarity in the tense? (*e*) *τοῦ λελύσθαι* :—Explain the use of the Genitive. (*f*) Ext. (E) *τὸ Ὠιδεῖον* .—describe.

9. Translate :—

(F) Æschines, Contra Ctesiphontem, §§ 215, 216 (Ed. Teubner.)

(G) Demosthenes, De Corona, Cap. 270 :—*Οὐκ ἀπορῶν δ' ὅτι χρὴ * * * πόθεν γὰρ ἄλλοθεν*; How do you construe and explain *οὐδὲ γὰρ ὧν ἐτυχεν ἦν* ?

10. (*a*) Translate, with explanatory notes, the following:—Ἐπ Μνησιφίλου ἄρχοντος, συγκλήτου ἐκκλησίας ὑπὸ στρατηγῶν γενομένης, καὶ Πρυτάνεων καὶ Βουλῆς γνώμη, Μαιμακτηριῶνος δεκάτη ἀπίοντος, Καλλισθένης Ετεονίκου Φαληρεὺς εἶπε. (*b*) Translate the following extract:—Δεδόχθαι τῷ δάμῳ τῷ Βυζαντίων καὶ Περινθίων, Ἀθαναίους ὁμεν ἐπιγαμίαν, πολιτείαν, ἔγκτασιν γᾶς καὶ οἰκιᾶν, προεδρίαν ἐν τοῖς ἀγῶσι, πόθοδον ποτὶ τὰν βωλὰν καὶ τὸν δᾶμον πράτοις μετὰ τὰ ἱερά, καὶ τοῖς κατοικέειν ἐθέλουσι τὰν πόλιν ἀλειτουργήτοις ἦμεν πασᾶν τᾶν λειτουργιᾶν. (*c*) Name the dialect of this extract, and state in what districts of Greece it was used.

GREEK PROSE COMPOSITION.

FRIDAY, APRIL 26TH:—AFTERNOON, 2 TO 5.

Examiner,..... ....REV. GEORGE CORNISH, LL.D.

Translate into Greek (accented):—

When these tidings reached Athens, a fleet of sixty triremes immediately sailed for Samos. Pericles was again one of the ten generals in command of the expedition, and among his colleagues was Sophocles, the tragic poet After several engagements between the hostile fleets, the Samians were obliged to abandon the sea and take refuge in their city, which, after enduring a siege of nine months, was forced to capitulate.

The Samians were compelled to raze their fortifications, to surrender their fleet, to give hostages for their future conduct, and to pay the expenses of the war, amounting to a thousand talents. The Byzantines submitted at the same time. During these operations, it was a point disputed among the states opposed to Athens whether the Samians should be assisted in their revolt; a question decided in the negative, chiefly through the influence of the Corinthians, who maintained the right of every confederacy to punish its refractory members.

The triumphs and the power of Athens were no doubt regarded with fear and jealousy by her rivals; but the conquest of Samos was not followed by any open manifestation of hostility. A general impression, however, prevailed that sooner or later a war must ensue; but men looked forward to it with fear and trembling from a conviction of the internecine character which it must necessarily assume. It was a hollow peace, which the most trifling events might disturb.

LATIN PROSE COMPOSITION.

WEDNESDAY, APRIL 11TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

Translate into Latin:—

If, then, men who have concealed what they ought to have told are

censurable, what is to be thought of those who have resorted to positive deception? C. Canius, a Roman knight, not wanting in talent, and liberally educated, having repaired to Syracuse for the sake of recreation, not of business, frequently mentioned his desire to purchase some gardens where he might invite friends, and amuse himself without interruption. On this becoming generally known, Pythius, who kept a bank at Syracuse, informed him that he had no gardens for sale, but that Canius might, if he chose, use his gardens as his own; and at the same time he invited him there to dinner on the following day. Canius having promised to come, Pythius, who, as a banker, was in high favor with all ranks, summoned some fishermen to his presence, and requested them to fish, the day after, in front of his gardens; telling them what he wished them to do. Canius came to dine punctually. A banquet had been sumptuously provided by Pythius. Before their eyes was a multitude of boats. Each fisherman brought to the table what he had caught: the fishes were laid before the feet of Pythius. On this, Canius enquires: 'Pray, Pythius, what does this mean? Why so many fishes, so many boats?' 'What wonder?' he replies. 'At this spot all the fishes in Syracuse are found: this is their haunt: they cannot dispense with this villa.' Canius, longing to possess the place, begs Pythius to sell it. He demurs at first. To be brief: he gains his point: the opulent and eager customer buys at the price that Pythius wished. He buys the gardens fully stocked. Pythius registers the debt, and concludes the business. The next day Canius invites his friends; he himself arrives early; not a single boat does he see. He asks of his nearest neighbor whether the fishermen were keeping holiday, since he saw none of them about. No holiday that I know of, replied the other: but no one is accustomed to fish here, and so I was all the more astonished at what took place yesterday; Canius became very angry. But what was he to do?

HISTORY OF GREECE AND ROME.

FRIDAY, APRIL 6TH :—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. (*a*) Give the legendary history of the Dorians, with an account of their conquest of the Peloponnesus. (*b*) What is the value, historically, of the legend of the Return of the Heracleidæ. (*c*) Distinguish between the Σπαρτιῆται, the Περίοικοι, and the Εἵλωτες.

2. Give, with dates when you can, the geographical limits and tribal divisions of Greek Colonization.

3. The hegemony of Athens, Sparta and Thebes in the political affairs of Greece;—discuss the events and causes that in each case contributed to its establishment and fall.

4. Describe in outline the institutions of the Athenian Democracy under Pericles, and compare them with modern institutions of the same kind.

5. What were the *οἱ Ἀμφικτύονες*? Derive the name. How was the most famous of them constituted, and what part did they play in Grecian affairs?

6. The Achæan League;—its members, objects, and results.

7. Trace the most important constitutional changes at Rome, giving the occasion and the dates of each.

8. Explain the origin and meaning of the phrases:—*Patres conscripti; Populus Romanus; Quirites; Plebs.*

9. The powers and functions of the office of Dictator. Whence was it derived, and what was the origin of the title?

10. The power of Carthage in the Western Mediterranean before its collision with Rome. Comment on the causes which enabled Rome to overcome Carthage.

11. The objects of the agitation of the Gracchi, and the causes of their failure.

12. What causes led to the abolition of the old Republic and the establishment of the monarchy under Julius Cæsar and his successors? Give an account of the state of Rome at this period in respect of religion, literary culture, and material resources.

GENERAL PAPER.

FRIDAY, APRIL 20TH:—AFTERNOON, 2 TO 5

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. What was the original seat of the Aryan race? Name the principal languages of the Aryan family. How is Sanscrit related to Greek and Latin? With what Greek dialect is Latin most closely connected?

2. Give Grimm's law for the interchange of consonants in the Greek and cognate languages, with instances.

3. Show the connection between the following words and their cognates in Greek or Latin, or in both:—*five, eight, ten, brother, sister, heart, fish, foot, draw, way, thatch, lay.*

4. Specify the different uses of *ἵνα, ὥστε, ut, quo, quum.*

5. Show how the Latin supplies the deficiency of a *Pres. Part. Pass.*, and of a *Past Part. Act.*

6. What is the general idea expressed by the Genitive Case? Account for the name it bears. Under what syntactical heads would you class the several genitives following:—(*a*) Capitis damnare. (*b*) Spes salutis. (*c*) Notus in fratres animi paterni. (*d*) Trepidi rerum suarum. (*e*) Homines insueti laboris. (*f*) Moris est Graecorum. (*g*) Serum erat diei. (*h*) Romae vixit. (Account for this apparent *Genitivus loci.*)

7. (*a*) Distinguish between the meanings of the following words according to the difference of their accentuation:—*καλος, πειθω, τροπος, ην, η, ειμι, εν, ει, εια, ανα, αν, ιω.* (*b*) Accentuate with the proper spiritus, the following:—*Ο μεν ουν παρων καιρος, ω ανδρες Αθηναιοι, ειπερ ποτε, πολλης φροντιδος και βουλης δειται· εγω δε ουχ ο τι χρη περι των παροντων συμβουλευσαι χαλεπωτατων ηγουμαι, αλλ' εκειν' απορω, τινα χρη τροπον, ω ανδρες Αθηναιοι, προς υμας περι αυτων ειπειν. πεπεισμαι γαρ εξ ων παρων και ακουων συνοιδα τα πλειω των πραγματων υμας εκπεφευγεναι τω μη βουλεσθαι τα δεοντα ποιειν, ου τω μη συνιεναι.*

8. Comment on the functions of the Chorus in the Greek Drama. Mention the phases which the Chorus underwent in Tragedy, and account for its eventual abolition in Comedy.

9. What changes in the construction and representation of Attic tragedies are ascribed to Aeschylus, Sophocles, and Euripides, severally?

10. Write explanatory notes on the following words and phrases in their reference to the Greek Drama:—*τραγῳδία, χορηγός, τὸ θεωρικον, χορὸν, διδόναι, χορὸν διδάσκειν, θυμέλη, Διονύσια τὰ ἐν ἄστει, ἐπίρρημα.*

MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

EUCLID—ARITHMETIC.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, LL.D. / ARCHIBALD DUFF, M.A.

1. The angle at the centre of a circle is double the angle at the circumference if they have the same part of the circumference for their base.

a. If two chords intersect within a circle, the angle between them is

equal to an angle at the centre subtended by an arc equal to half the sum of the arcs which they intercept.

2. Equiangular triangles have the sides about the equal angles proportional, the sides opposite to the equal angles being homologous. (Explain clearly the meaning of the last clause.)

a. If three lines meet in a point, and any number of parallel lines be drawn across them, these parallel lines will be all cut in the same ratio.

3. Find a mean proportional between two given straight lines.

4. Construct a square that shall be equal to a given rectilineal figure.

5. Inscribe a circle in a given triangle.

6. Triangles and parallelograms having the same altitude are to one another as their bases.

a. Show that one of the triangles in the figure of Euclid IV. 10, is a mean proportional beween the other two.

7. Add together 65,432, 43,210, 1,444, 65,001 and 54,321 in the septenary scale; giving a full explanation.

8. Reduce £749 16 $5\frac{1}{4}$, sterling, to dollars and cents, the nominal par value of £1 stg. being \$4.44$\frac{4}{9}$, and exchange being quoted at 10 per cent. premium.

a. Find the value of the same in Halifax currency.

9. Multiply $\frac{1}{2}$ of the square root of 73 by $\frac{3}{4}$ of the cube root of 118, and divide the result by the 5th power of 2, expressing the final result in both kinds of fractions.

10. Two pendulums are set swinging, one of which is 39.139 inches long, and the other 9.78 inches; the time occupied by a single swing of the former is one second, find the time of the latter, assuming that the times are proportional to the square roots of the lengths.

11. Divide .00214 by 1.5. Give the reason for the process.

12. Find the value of

$$\frac{\frac{1}{4} + 3\frac{1}{3} - 2\frac{1}{5}}{\frac{3}{5} \text{ of } 4^6}$$

SECOND YEAR.

CONIC SECTIONS AND SOLID GEOMETRY.

SATURDAY, MARCH 10TH:—MORNING, 10 to 12.

Examiner,..... ARCHIBALD DUFF, M.A.

1. If a tangent to an ellipse be produced to meet the directrix, the line

joining the point of intersection to the focus is perpendicular to the line rom the focus to the point of contact.

2. If two chords of a parabola intersect one another, the rectangles contained by their segments have the same ratio as do the parameters of the diameters which bisect the chords.

3. In a parabola the subtangent is equal to twice the abscissa.

4. The latus rectum is equal to four times the focal distance of the vertex.

5. If a solid angle be contained by three plane angles, any two of them are together greater than the third.

6. If a straight line be perpendicular to a plane, any plane passing through that straight line shall be perpendicular to the former plane.

7. Draw a straight line perpendicular to a given plane from a given point without it.

8. Straight lines which are each of them parallel to the same straight line, and not both in the same plane with it, are parallel to one another.

INTERMEDIATE EXAMINATION.

EUCLID—ARITHMETIC.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
REV. A. N. MCQUARRIE, M.A.
ARCHIBALD DUFF, M.A.

1. If a right line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part of it produced, together with the square on half the line bisected, is equal to the square on the right line made up of the half and the part produced.

a. Give also the algebraic proof.

2. If from a point without a circle there be drawn two right lines, one of which cuts the circle and the other meets it, and if the rectangle contained by the whole cutting line and the part of it without the circle, be equal to the square on the line which meets it, the line which meets also touches the circle.

3. Describe a rectilineal figure which shall be similar to one and equal to another given rectilineal figure.

4. Divide a line so that the rectangle under the whole and one part shall be equal to the square on the other part.

5. If the vertical angle of a triangle be bisected by a straight line which meets the base, the base is divided by it into segments which have the same ratio as the adjacent sides.

a. If the base be cut externally in the same ratio by a line from the vertex, what will be the angle between the two lines cutting the base?

6. In a given circle inscribe a triangle equiangular to a given one.

7. If two equal parallelograms have an angle in each equal, the sides about the equal angles are reciprocally proportional.

8. What are the exact cubic contents of a block of marble 4 ft. 7′ long by 9 ft. 6′ wide and 2 ft. 11′ thick.

9. Of the ratios 6 : 7, ·017 : 8, 23 : 1·1, ·88 : 1·76, point out which is the greatest and which the least. What is the ratio compounded of these ratios?

10. Divide $\frac{3}{4}$ of $\frac{\sqrt{96}}{\frac{5}{6}}$ by $\frac{\frac{1}{2} \text{ of } 7^3}{\frac{3\frac{1}{4}}{2}}$

11. $\frac{4}{5}$ths of a farm belong to A and the rest to B, A sells $\frac{3}{4}$ of his share to C, and $\frac{1}{12}$ of it to B; what portions of the farm do A, B, and C hold after the sales?

12. Divide the sum of twenty-four ten thousandths and twenty-four hundredths by twenty-four.

13. In what time will $678, at 8 per cent. simple interest, amount to $994·56?

INTERMEDIATE EXAMINATION.

TRIGONOMETRY—ALGEBRA.

TUESDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, LL.D.; REV. A. N. MCQUARRIE, M.A.; ARCHIBALD DUFF, M.A.

1. To ascertain the distance between two redans in an enemy's works, a base line of 500 yards is measured, and the angles which each redan makes with the base line are observed to be 118° 20′ and 46° 14′ at one extremity, and 88° 48′ and 33° 12′ at the other; what is their distance?

2. Prove

$$\text{Sin } A = \frac{2\sqrt{s(s-a)(s-b)(s-c)}}{bc}$$

and write down the corresponding values of *sin B* and *sin C*.

3. Find expressions for $tan\ (A + B)$ and $tan\ (A - B)$ in terms of the tangents of A and B.

4. Find the sine, cosine, tangent, &c., of 60°, and calculate their values to five places of decimals.

5. The cosine of the sum of two angles is equal to the product of the cosines of the angles, less by the product of their sines.

a. $Cos\ 2\ A = cos^2\ A - sin^2\ A$.

6. Calculate the distance a person must recede from a pillar 60 feet high in order that it shall subtend an angle of 45°; the height of his eye above the ground being 5 feet.

7. Resolve into elementary factors:

$$\begin{cases} m^3 - n^3 - m(m^2 - n^2) + n\,(m-n)^2, \\ 2\,(a^3 + a^2\,b + a\,b^2) - (a^3 - b^3) \\ 12\,x^2 - 5\,x - 2. \end{cases}$$

8. Show that

$$1 - \frac{a^2 + b^2 - c^2}{2\,a\,b} = \frac{(a - b + c)\,(b - a + c)}{2\,a\,b}$$

9. Solve the equations:

$$\frac{x-7}{x+7} = \frac{2\,x - 15}{2\,x - 6} - \frac{1}{2\,(x+7)},$$

$$\begin{cases} \frac{x}{a} + \frac{y}{b} = 1 \\ \frac{x}{b} - \frac{y}{a} = 1, \end{cases}$$

$$\frac{10\,x^2 + 17}{18} - \frac{12\,x^2 + 2}{11\,x^2 - 8} = \frac{5\,x^2 - 4}{9}$$

10. A draper bought a piece of silk for £16 4s., and the number of shillings which he paid per yard was $\frac{4}{3}$ the number of yards. How much did he buy?

11. Solve the following:

$$2\sqrt{x} + \frac{2}{\sqrt{x}} = 5;$$

$$x + y = 100;\ x + \frac{y\,z}{y+z} = 92;\ x + z = 164.$$

12. A line of length a is bisected and produced. Find the length of the produced part so that the rectangle under half the given line, and the line made up of the half and the produced part shall be equal to the square of the produced part.

13. Find the expression for the difference of the 27th powers of two quantities divided by the difference of their cubes. Also the *G.C.M.* of the former and the difference of the 20th powers.

THIRD YEAR.

HYDROSTATICS.—OPTICS.

WEDNESDAY, APRIL, 4TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. State Dalton and Gay-Lussac's law, and from it deduce the following metric formula:—

$$v' = v \frac{273 + t'}{273 + t} \times \frac{p}{p'}$$

a. Show that the product of the volume and pressure of a given mass of gas, divided by its absolute temperature is constant.

2. Prove the following rule for calculating the pressure in pounds per square inch on a surface immersed in water:

"For every 7 feet of depth allow 3 lbs. pressure per square inch. To the result add one per cent."

3. Describe the suction-pump and prove that the effective pressure on the piston is equal to the weight of the water column, whose base is the area of the piston, and whose height is the height of the water in the pump above the level of the well.

4. If the barometer stand at 29·75; the thermometer at 47° F. calculate the weight of a cubic foot of moist air, the elastic force of the vapour being 0·402 and its sp. gr. 0·622, and compare this with weight of same volume of dry air?

5. Describe Nicholson's hydrometer, constructing a formula for its use.

6. Suppose an iceberg (sp. gr. 0·918), if cut by a vertical plane, to have a section of nearly the shape of an isosceles triangle. I observe length of water-line to be 200 feet, and altitude 15 feet. How far does the bottom of the iceberg project horizontally beyond the end of the water-line? Sp. gr. of sea-water, say 1·028.

7. Describe the astronomical telescope, giving a formula for finding its magnifying power.

8. Find the focal lengths of a double concave lens and a double convex lens of crown glass (μ 1·525) of equal curvature, radius being $11\frac{1}{2}$ inches; explaining by figures what you mean.

9. Prove that the deviation of rays incident nearly perpendicularly on a prism of small angle is equal $(\mu - 1)$ times the angle of the prism?

10. Explain the manner in which objects are magnified by the pocket lens; define its magnifying power, and obtain a formula for determining it?

11. Prove the formula for a *convex* spherical mirror

$$\frac{1}{D} + \frac{1}{d} = \frac{2}{r}$$

explaining the rule which determines the signs of the quantities?

12. Define the *dispersion* produced by a prism and calculate its value for a prism of fluor spar of 6° 11′ angle, the index of refraction being 1·434 and the dispersive power ·022.

THIRD YEAR.

MECHANICS.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / ARCHIBALD DUFF, M.A.

1. Explain the meaning of, and prove the truth of the equation for the path of a projectile in a vacuum:—

$$y = x \tan e - \frac{gx^2}{2 V^2 \cos^2 e}$$

What curve does it represent?

2. Define *direct collision* of two balls, and investigate a formula for determining their velocities after the shock, knowing their velocities before, their masses, and the co-efficient of elasticity. Show that if they are perfectly elastic and equal, they exchange velocities.

3. It was stated that the Armstrong 100-ton gun at Spezzia hurled a projectile of 2,000 lbs. weight with a velocity of 1,456 feet per second, and the "force of the blow" was set down as 29,400 foot-tons. Explain the meaning of the last part of this statement, and test the accuracy of the calculation.

4. Find the resultant of any number of parallel forces acting on a body

5. Give Newton's statement of the laws of motion. What is the nature of the proof of their truth?

6. Describe the Danish balance.

7. If the force required to draw a train of carriages on a level railroad be $\frac{1}{200}$th part of the load, find the force required to draw a train of 11 cars, each weighing 5 tons, up a gradient of 1 in 70; proving your formulæ.

8. Construct a formula for the space described in a given time by a body moving in a straight line under a constant force.

9. Find the time occupied by a railway train without engine in running down an incline of 1 mile with a total fall of 40 feet; the force of gravity being 32·16 and the resistance from friction and air being estimated at 7 lbs. per ton.

10. The Radius of Jupiter is about 41200 miles, periodic time 9 h. 56 m. Find the force diminishing gravity at the equator.

11. A heavy ball suspended by a fine wire at New York ($g = 32{\cdot}16$) vibrates in a small arc; 56 vibrations are counted in 2 min. Find length of wire.

12. Construct a formula for the acceleration of the number of vibrations of a pendulum due to change of place.

B. A. ORDINARY EXAMINATION.

ASTRONOMY—OPTICS.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiners ..... { ALEXANDER JOHNSON, LL.D.
REV. A. N. MCQUARRIE, M.A.

1. Define Declination and Right Ascension, and describe how, if these be known, a map of the Stars may be made.

a. Name the instruments used in ascertaining the R. A. and Decl. of any given Star, and describe the mode of using them for this purpose.

2. Give a brief account of the phenomena of the Tides, and explain why there are two tides in one day at the same place.

3. How is the latitude of a place found from observing the Sun's meridian altitude.

4. Give a short account of the physical constitution of the Sun, and the hypothesis concerning it.

5. Account for the Phases of the Moon.

6. Investigate the method for finding the periodic time of an Exterior Planet, and apply it to the case of Jupiter, whose synodic period is 398.8 days.

7. Describe the Newtonian Telescope.

8. A person who could read, with the naked eye, the small print of a placard at the distance of 11 inches, found that, with a pair of spectacles, he could read the same print at a distance of 7 feet 7 inches. Find the kind and the focal length of the spectacles.

9. Find the dispersion produced by a lens of fluor spar of $1\frac{1}{2}$ inch aperture and 10 inch focus, the dispersive power of the substance being .022 ; and then find the focal length of a water lens (disp. power .035) which will achromatize it.

10. Define *centre of a lens*, and find it geometrically. What use is made of this point in optical investigations ?

11. Describe any experiment by which the total reflection of light may be illustrated.

12. State the laws of Refraction, and describe a method of demonstrating them experimentally.

13. Show by a geometrical construction the path of a ray passing through a thin lens and prove the truth of it.

14. Define Parallax, and Horizontal Parallax, and explain how the distances of celestial bodies may be calculated by means of the latter.

B. A. ORDINARY EXAMINATION.

MECHANICS—HYDROSTATICS.

THURSDAY, APRIL 5 :—MORNING, 9 TO 12.

Examiners,..... } ALEXANDER JOHNSON, LL.D.
} REV. A. N. MCQUARRIE, M.A.

1. If the length of a seconds pendulum be L, find the space described by a falling body in one second.

2. Define constant force, and prove the following relations between v, s, f, t, when it acts on a body :—

$$v = ft\,; \qquad s = \tfrac{1}{2} ft^2$$

3. Find the condition necessary for equilibrium in the wheel and axle.

4. If three forces, meeting at a point, equilibrate each other, the sum of their moments, with respect to any point, is zero.

5. Find the ratio which the Power bears to the Pressure perpendicular to the thread of a screw, when the power is applied at the extremity of a lever attached to the screw.

6. Prove that the part of Centrifugal force, employed in diminishing gravity, varies as the square of the cosine of the latitude.

7. Find the time of oscillation of the simple pendulum.

8. State Dalton and Gay-Lussac's law, and deduce from it a formula for calculating the volume which a gas will assume at a given temperature.

9. Describe Nicholson's Hydrometer and the method of using it.

10. State the principles from which are derived the equations connecting the volumes, pressures, densities, and temperatures of the mixture of several gases, and write down the equations.

11. State and prove the principle of Archimedes for floating bodies, and from it deduce the fraction of the whole which is immersed, if the specific gravities of the body (supposed homogeneous) and liquid are known.

12. If a prismatic bell, 10 feet high, be sunk in sea-water until the water rises half way up the bell, find how far the top of the bell must be below the surface, the temperature remaining the same.

B.A. ORDINARY AND THIRD YEAR.

EXPERIMENTAL PHYSICS.

ELECTRICITY, MAGNETISM, AND SOUND.

THURSDAY, APRIL 5TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe the mode of measuring the charge of a battery of Leyden-jars by means of a Lane's electrometer.

2. Describe the manner in which a needle may be magnetized by: 1. Frictional Electricity; 2. A single magnet; 3. Voltaic electricity.

3. Describe the tangent galvanometer, and prove the truth of the principle on which its measurements depend.

4. A magnet is thrust into, and after some time pulled out of, a helix, which is connected with a galvanometer; state the effects. Describe them, considering the magnet as a solenoid on Ampère's theory.

5. Describe the arrangement of a Ruhmkorff Induction Coil when charging a battery of Leyden jars, and explain its action.

6. Ten exactly similar cells in series (end to end), produce a deflection of 46° in a tangent galvanometer, the external resistance being 10 units. If the same cells are arranged two abreast, so that there are 5 pairs in a series, a deflection of 33° 42 is produced; find the internal resistance of the cell.

7. A submarine cable has a fault in it. Calculate the distance of this from one end, from the following measurements made there:—

Resistance of cable before it was defective = 100 units.
Resistance of cable when the distant end is put in connection with earth, = 92 "
Resistance of cable when the cable is disconnected from the earth at the distant end = 164 "

8. Given a siren, a tuning-fork, and a closed tube of variable length, how may the velocity of sound in air be measured?

9. Describe König's apparatus for the analysis of a musical sound by means of manometric flames.

10. Describe an experiment showing that when a rod is thrown into longitudinal vibrations, it is lengthened and shortened alternately.

11. Draw diagrams showing the divisions into nodes and ventral segments of a stopped organ-pipe, and of an open one respectively, when they yield (1) the fundamental note, (2) the first harmonic, (3) the second harmonic.

12. Explain clearly the manner in which sound is propagated through air, defining wave, length of wave, and amplitude.

HONOUR EXAMINATIONS.

FIRST YEAR.

GEOMETRY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 1.

Examiners,..... { ALEXANDER JOHNSON, LL.D
ARCHIBALD DUFF, M.A.

1. Describe a triangle which shall have its vertices on three given straight lines, and its sides tangents to a given circle.

2. Through a given point within a given circle, any transversal is drawn and a point taken on it such that the reciprocal of its distance from the given point is equal to the difference of the reciprocals of the intercepts between the given point and the circle; find the locus of the point of section.

3. A centre of similitude of two circles is joined with the point of contact of one of the circles with either common tangent through the other centre of similitude. Prove that the line joining the middle point of the line so drawn and the centre of the circle bisects that common tangent.

4. If through a fixed point two transversals be drawn intersecting two given straight lines, and if the points of intersection be joined transversely; find the locus of the point of intersection of the joining lines.

5. If the lower angle of a square, described externally upon the base of a triangle, be joined with the vertex of the triangle, the joining lines will intercept on the base the side of the inscribed square which stands upon the base.

6. Given the sum of the squares of two lines, find them when their sum is a maximum.

7. Given the base and the difference of the sides of a triangle, the polar of the vertex with respect to one extremity of the base as origin always touches a fixed circle.

8. State and prove Brianchon's theorem, and reciprocate it.

9. The reciprocals of lines in harmonical prorgession are in arithmetical progression; and, conversely, the reciprocals of lines in arithmetical progression are in harmonical progression.

10. In a given circle inscribe a triangle having its base parallel to a given line, and its two other sides passing through two given points not both situated on a line parallel to the given line.

11. A triangle is given in species. One vertex turns round a fixed point, whilst another vertex moves along the circumference of a given circle: find the locus of the third vertex.

12. The circles circumscribing the four triangles formed by four intersecting straight lines all pass through the same point, and this point and the four centres lie in the same circumference.

FIRST YEAR.

ALGEBRA—THEORY OF EQUATIONS.

WEDNESDAY, APRIL 25TH:—MORNING, 9 TO 1.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. State and prove Sturm's Theorem.

2. Apply Sturm's Theorem to the equation

$$x^4 + 2x^2 - 4x + 10 = 0.$$

3. Solve the equation

$$x^4 - 10x^2 - 20x - 16 = 0.$$

4. Solve the equation

$$x^3 - x - 6 = 0.$$

5. The roots of the following equation are in arithmetrical progression; find them

$$x^4 - 8x^3 + 14x^2 + 8x - 15 = 0.$$

6. Prove that a real root of the equation $f'(x) = 0$ lies between every adjacent two of the real roots of the equation $f(x) = 0$.

7. Any equation of an even degree which is in its simplest form, and has its last term negative, has at least two real roots of contrary signs.

8. Resolve $\frac{1}{a^4 - x^4}$ into its partial fractions

9. Find the amount of an annuity in any number of years at compound interest.

10. Give Cardan's Solution of a Cubic Equation; and investigate the forms of the roots resulting from it, according as the auxiliary quadratic has real, imaginary or equal roots.

11. Solve the following equation which has equal roots:—

$$x^4 - 11x^2 + 18x - 8 = 0.$$

12. The roots of the equation $x^3 + px^2 + qx + r = 0$ are denoted by a, b, c; transform the equation into another whose roots shall be $\frac{1}{b+c}, \frac{1}{c+a}, \frac{1}{a+b}$.

13. In an Arithmetic Progression a is the first term, b the common difference, and S_n the sum of n terms; prove that—

$$S_n + S_{n+1} + S_{n+2} + \&c. \text{ to } n \text{ terms} = (3n-1)\frac{na}{2} + (7n-2)(n-1)\frac{nb}{6}$$

14. Show that there are only $n + 1$ terms in the expansion of $(1 + x)^n$, when the index is a positive integer.

15. Show that the total number of combinations that can be formed out of $n + 1$ things is more than twice the number that can be formed out of n things.

16. If n balls, a, b, c, d, &c., be thrown promiscuously into a bag and two be drawn out, the probability that these will be a and b, is $\frac{2}{n(n-1)}$

SECOND YEAR.

ANALYTICAL GEOMETRY—CALCULUS.

MONDAY, APRIL 23RD:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Transform the equation

$$11x^2 + 84xy - 24y^2 = 156$$

to the axes of the curve, the co-ordinates being rectangular.

2. Find the locus of the foot of the perpendicular let fall from either focus of an ellipse on the tangent.

3. If two fixed points on an hyperbola be joined to any variable point on the curves, the portion which the joining lines intercept on either asymptote is constant.

4. Find the condition that two conic sections, given by the general equations, should be similar, even though not similarly placed.

5. Given any number of points, show that the locus of a point such that m' times the square of its distance from the first + m'' times the square of its distance from the second + &c., is constant, is a circle whose centre is the centre of mean position of the given points

6. Find the equation of the chord joining the points $x'y'$, $x''y''$ on the circle $x^2 + y^2 = r^2$.

7. Given a point and two fixed lines; draw any two lines through the fixed point, and join transversely the points where they meet the fixed lines; find the locus of intersection of the transverse lines.

8. Prove analytically that the perpendiculars from the vertices on the opposite sides of any triangle meet in a point.

9. Define differential co-efficient, and find the differential co-efficient of

$$\cos x, \quad \log x, \quad e^x, \quad \sin^{-1} x.$$

10. State and prove Taylor's Theorem.

a. Apply it to expand $\sin(x + h)$.

11. Find the value when $x = 0$ of the fraction.

$$\frac{\log \tan x}{\log \tan 2x}$$

12. Prove that of all triangles on the same base, and having equal vertical angles, the isosceles has the greatest perimeter.

13. Find the volume of the solid generated by the revolution of a parabolic area round its ordinate.

14. Integrate

$$\int_x \frac{x}{(x-2)(x+3)^2}; \quad \int_x \frac{x^2}{(1+x^2)^{\frac{3}{2}}}; \quad \int_\theta (\cos\theta)^6.$$

15. Integrate $\int_x \frac{X}{(\log x)^n}$, n being a whole number.

16. Integrate

$$\int_x \frac{x^m}{\sqrt{a+bx+cx^2}}; \quad \int_x \frac{1}{1+5x^2}; \quad \int_x \frac{x-1}{x^3+1}.$$

SECOND YEAR,

ALGEBRA AND TRIGONOMETRY.

WEDNESDAY, APRIL 25TH:—MORNING 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Solve the equation $x^3 - 17 = 0$ by Horner's method.

2. Apply Newton's method to determine the root lying between 2 and 3 of the equation.

$$x^3 - 2x - 5 = 0.$$

3. Solve the equation

$$x^4 - 12x^3 + 49x^2 - 78x + 40 = 0.$$

4. If the roots of the equation

$$x^3 + px^2 + qx + r = 0.$$

are in Geometrical progression, $rp^3 = q^3$. Hence solve the equation

$$x^3 - x^2 + 2x - 8 = 0$$

5. Find limits to the positive and negative roots of

$$x^6 - 5x^5 + x^4 + 12x^3 - 12x^2 + 1 = 0$$

6. An equation of an odd degree has at least one real root of the sign contrary to that of the last term.

7. Given $a^x + \frac{1}{a^x} = b$, find a logarithmic expression for the value of x.

8. Insert three geometric means between $\frac{1}{3}$ and 9.

9. In a spherical triangle prove

$$\sin c \cot a = \cot A \sin B + \cos B \cos c.$$

10. Find an expression for the area of a spherical triangle in terms of its angles; and apply it to find the number of square feet in the area when the angles are 75°, 50°, and 85°, and the radius of the sphere is 15 feet.

11. The sum of the angles of a spherical triangle lies between two and six right angles.

12. Define the *modulus* of a system of logarithms and calculate it accurately to five places of decimals for the common system, assuming the following formulae:

$$\log_e u = 2\left\{\frac{u-1}{u+1} + \tfrac{1}{3}\left(\frac{u-1}{u+1}\right)^3 + \&c.\right\}$$

$$\log_e (y+z) = \log_e y + 2\left\{\frac{z}{2y+z} + \tfrac{1}{3}\left(\frac{z}{2y+z}\right)^3 + \&c.\right\}.$$

13. If we assume

$$x = \cos\theta - \sqrt{-1}\sin\theta$$

prove that

$$2\cos m\theta = x^m + \frac{1}{x^m}$$

14. The two angles of a right-angled spherical triangle are 39° 42′ and 74° 26′ find the hypotenuse.

ENGLISH, RHETORIC AND HISTORY.

FIRST YEAR.

ENGLISH LANGUAGE AND LITERATURE.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiner.....VEN. ARCHDEACON LEACH, D.C.L.

1. Which are the three distinct classes for which our middle age literature is said to have been designed ?

2. Show that it is unreasonable to demand that there should be no books but such as are serious and solemn.

3. Explain how it happens that the future character of the individual may be permanently modified by the books he studies.

4. Give some account of the life and literary works of Theodore, Bede, Alcuin, Adrian and Joannes Scotus Erigena.

5. Describe the usual course of early national literature.

6. Relate the first adventure of the tale of Beowulf, and explain the versification.

7. In the transition from Anglo-Saxon to Semi-Saxon, and from Semi-Saxon to Old English and Middle English, mention the changes that took place in the inflected parts of speech.

8. Give the substance of the remarks on the language spoken in Scotland south of the Forth in the fourteenth century.

9. Give some account of the chief romances of the Arthurian series.

10. State what you remember of the remarks on the Troubadour poetry.

11. Relate the story of Guy of Warwick.

12. Enumerate the Canterbury Tales and give the story of the Prioress.

13. Give the substance of the critical remarks on the productions of Lydgate, and mention his principal productions.

14. Mention the principal Scottish poets of the fifteenth century ; with characteristic notices.

15. Of Anglo-Saxon words, give the classification founded on the meaning of the words.

16. Mention the different periods during which particularly Norman French words passed into the English vocabulary.

INTERMEDIATE EXAMINATION.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

ENGLISH LITERATURE.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give the substance of the remarks on the introduction of Christianity into Great Britain and the superiority of Ireland in Anglo-Saxon times.

2. Mention the principal events that during the thirteenth century affected decisively the intelectual progress of England.

3. Which are the principal works written in Semi-Saxon that remain ?

4. Enumerate the principal literary compositions in the Anglo-Saxon tongue.

5. What is said to be the peculiar character of Anglo-Saxon Literature, and what are the causes that have been assigned for it ?

6. Mention, with some characteristic notice of each, the principal historians in England that wrote in Latin during the Norman times.

7. Give some account of the Irregular Latin literature of the Norman period.

8. What is said to be the origin of the Norman French romances, and how were they introduced into England ?

9. Give some account of Marie of France and her lays.

10. Give the substance of the remarks on Robert Langland's poem.

11. Give the substance of the critical remarks on Gowers' "Confessio Amantis ; " and an outline of one of his tales.

12. Whence were derived the Scandinavian features of the Anglo-Saxon ?

13. Which of the Anglo-Saxon dialects is specifically the parent of the English of the present time ?

14. Give the inflections of the Anglo-Saxon that have been dropped and those that have been retained.

15. Show that all the modern Gothic tongues deviate less widely from their originals than do the modern classical tongues from the Latin, and account for the fact

THIRD YEAR.

RHETORIC (WHATELY, PARTS II. and III.)

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner..... .....VEN. ARCHDEACON LEACH, D.C.L

1. Give the substance of Whately's Analysis of Persuasion, and mention the processes on which Persuasion is said to depend.

2. Aristotle speaks with reprobation of an appeal to the passions: how is his language to be interpreted?

3. Show that sentiments or motions are not under the direct control of the will.

4. How does it happen that men are more apt to be misled by sophistical arguments addressed to the understanding than they are by the excitement of passions?

5. Mention the methods by which passions unfavourable to the object of the speaker are to be allayed or diverted.

6. In a mixed audience what is the best general rule for avoiding the disadvantages of too great brevity and too great prolixity of style?

7. Give the substance of the remarks on Indirect Desciption.

8. Mention the principal marks of well constructed sentences.

9. Give the principal rules to be observed in the use of Metaphors.

10. What is the correct notion of copiousness of language?

11. What is the advantage that lies in the use of Antithesis: and what is the meaning of Mock-Antithesis?

12. Give the rules for the proper use of the Interogative figure of speech.

13. How may elegance of style be distinguished fromenergy of style?

14. Give Whately's notion of poetry.

15. What are the remarks of Dr. Adam Smith quoted as bearing upon the subject of poetry

B. A. ORDINARY EXAMINATION.

ENGLISH, (MARSH).

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Which are the chief authorities for the conquest of Britain by the Saxons, and what estimates have been formed of the value of the evidence of each?

2. Show that the study of Anglo-Saxon is an important part of an English education.

3. Show the advantage of Latin as an "educational engine."

4. Give the substance of the remarks on the English of the fourteenth century.

5. Whence arises the necessity of scientific nomenclature?

6. Give the substance of what is said in regard to the different historical periods of the English language.

7. Show that the English language is not the result of a mixture of Anglo-Saxon and French.

8. Give the substance of what is said in regard to the relations between the general idiom of a language and the moral and intellectual character of those who speak it.

9. In what respects chiefly has the English tongue been affected by the art of Printing?

10. How is the comparatively late origin of English literature accounted for?

11. Mention the principal facts explanatory of the changes of form in different classes of words in inflected languages.

12. Give the substance of the remarks in regard to national peculiarities of intonation.

13. Whence arises the poverty of the English tongue in Rhymes? and mention the suggestion offered on that subject.

14. Which are the points of difference between accentual rhythm and the ancient time prosody?

15. Whence arises the need for the use of Synonyms?

B.A. ORDINARY EXAMINATION.

HISTORY (HUME).

MONDAY, APRIL 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give an outline of the history of Richard I.

2. When were the English expelled from France, and what was the position of parties in England at that time?

3. In what respects does the period of the Plantagenets form, as Hume says, one of the most important and interesting epochs of English History?

4. Relate the history of the *accession* of Henry VII:—of the invasion of Lambert Simnel and of the attempts of Perkin Warbeck.

5. How did England become connected with the Kingdom of Scotland in Henry VII.'s reign, and what importance attached to the event in question?

6. How does Hume describe the latter days and the character of Henry VII.?

7. Describe the temper and prospects of the English on the accession of Henry VIII., and the motives that led Henry to engage in the war against France.

8. Relate the history of the Duke of Somerset, Edward VI.'s time.

9. How did the English Parliament act after the marriage of Mary to Philip of Spain, and what were the powers with which the commission of the twenty-one persons was invested?

10. What were the subjects of debate in the conference at Hampdon Court after the accession of James, and what was the result of the conference?

11. Give an account of the battle of Marston Moor.

12. What were the grounds of Cromwell's quarrel with the Parliament, and how was it concluded?

13. Give an outline of the fortunes and fate of the Duke of Monmouth.

14. How did the Bishops act upon the publication by James of the second declaration of Indulgence?

15. Give the substance of Hume's remarks on the antagonistic theories of Government that agitated the English in James II.'s time.

B.A. ORDINARY EXAMINATION.

HISTORY (GIBBON).

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. What was the policy of Augustus in regard to the extending of the empire by conquest? Define its then boundaries.

2. Describe the different territorial areas in which the Greek and the Latin languages were spoken.

3. Give some account of the origin and the claims of the Prætorian guards.

4. Why was the Emperor Septimius Severus considered as the principal author of the decline of the Roman Empire?

5. Give a brief account of the Persian war in the time of Alexander Severus.

6. Give some account of the fortunes and fate of Zenobia and Longinus.

7. Give the substance of the remarks on the retirement of Dioclesian.

8. Give an account of the origin of the Labarum and the date of the establishment of Christianity as the state religion.

9. Relate the history of the Church from the establishment of Christianity till the death of Constantius.

10. Give the substance of Gibbon's account of the different Scythian races that inhabited Central Asia.

11. Give an account of the battle of Adrianople, with the circumstances antecedent and the consequences.

12. Give an outline of the history of Belisarius.

13. Give the history of the Institutes of Justinian, and mention the divisions thereof as given.

14. Give the substance of Gibbon's remarks on the title Great as applicable to Charlemagne.

15. Describe the taking of Constantinople by Mehomet II.

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B. A. EXAMINATION FOR HONOURS.

ENGLISH HISTORY.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner,..... .....VEN. ARCHDEACON LEACH, D.C.L.

1. What influence is Roman Civilization supposed to have exerted in Britain? To what extent did the Latin then spoken affect the English vocabulary?

2. Give an outline of Anglo-Saxon institutions.

3. Give some account of the kingdoms of the Heptarchy.

4. When did the invasions of the Danes commence and terminate? How long did they exercise sovereign power? What parts of the country were particularly occupied by them?

5. Give an outline of the Life of Dunstan.

6. Give some account of St. Augustine and his mission.

7. Mention the principal events that occurred in the reign of Edward the Confessor.

8. State the events and conditions that led to the Norman Conquest.

9. What is known of King Alfred's early education?

10. What motives chiefly influenced Alfred in the construction of his Code of Laws? Enumerate some of their principal provisions.

11. Relate the history of Alfred's conflicts with the Danes after his re-appearance in the spring of 878, and of his final victory.

12. Give some account of the orders of the Benedictines, the Franciscans and the Dominicans.

ENGLISH HISTORY.

FRIDAY, APRIL 6TH :—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give a sketch of the life of St. Anselm.

2. Give an account of King John's contest with the Pope.

3. Give the history of Edward the First's conduct in relation to the vacancy of the throne of Scotland.

4. Describe the English Constitution as it was at the close of the reign of Edward I.

5. When was Wales subdued? Give an account of the transactions in connection with that event.

6. When was Ireland subdued at least the greater part of it? Mention the circumstances connected therewith.

7. Mention the principal events that occurred in the reign of Henry VII.

8. Give the history and the substance of the statute of Præmunire.

9. What were the position of the Queen and the condition of the country at the accession of Elizabeth? What were the causes of such a state of affairs?

14. What were the principal subjects of Legislation in the first Parliament of Elizabeth?

11. How was the Liturgy received in the Parishes, and what was the conduct of the bishops in regard to it?

12. State the differences that mark the Reformation in England and Scotland.

13. What events at the close of the reign of James I. are believed to have laid the foundation of the troubles of his successor?

14. Give some account of the great men that managed the affairs of the nation at the outbreak of the troubles in the reign of Charles I.

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ENGLISH (LANGUAGE).

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give the general rules for the declension of Anglo-Saxon nouns.

2. State the general rule for the Gender of Anglo-Saxon nouns.

3. What is said to be the origin of the A. S. Articles? Decline the one declinable.

4. Write in tabular form the inflections of the different declensions.

5. Whence arise the numerous irregularities observable in Anglo-Saxon parts of speech?

6. Give examples of nouns in their primitive and their secondary forms.

7. Give examples of terminations with definite meaning that are used in compound names and of others the signification of which is indefinite.

8. How are proper names generally constructed?

9. Give the regular forms of comparison of adjectives and of adverbs.

10. Which are the Anglo-Saxon terms for the numbers, 11, 13, 21, 70, 110, 120.

11. Conjugate the auxiliary herbs,—"habban" "wesan" and "beon" and weorthan.

12. Which are the Anglo-Saxon Negative Verbs.

13. Indicate whatever you observe as peculiar in the following phrases: —"Twentig wintra," "gelic witegan," "He wealt ealles," we theowiath blithelice tham cynge," Hit thaes cildes waes," "forth nihtes, utan faran to Bethleem."

14. Translate and give a grammatical analysis of the following passage: —"Thonne is to-emnes thaem lande suthewеardum on othre healfe thaes mores Sweoland oth thaet lande northweard and to-emnes tham lande northe-weardum, Cwenaland. Tha cwenas hergiath hwilum on tha North-men afer thone m'or, hwilum tha Northmen on hy. And thaer sint swithe micle meras fersce geond tha moras: and herath tha Cwenas hyra scypu afer land on tha meras and thanon hergiath on tha Northmen. Hy habbath swythe lythe scipa and swithe leohte?

ENGLISH LITERATURE.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner, ...VEN. ARCHDEACON LEACH, D.C.L.

1. Give an analysis of the "Tempest" of Shakespeare, and apply to the story characters and diction, the rules of criticism as given in the lecture

2. Give the substance of Hallam's remarks on the obscurity that surrounds the personal history of Shakespeare.

3. What estimate of the classical attainments of Shakespeare would you form from the internal evidence of his works?

4. State and explain the three-fold division of Epic Fable, according to Pope's exposition of it in his preface to his translation of the Iliad.

5. Give some account of the origin of the regular Drama, and mention the principal dramatic works that belong to the first stage of the Regular Drama.

6. In what respects is the Decameron of Boccacio interesting to the student of English Literature?

7. Give the substance of Hallam's remarks on the Norman romances and tales.

8. Give some estimate of the literary qualifications of James I., of Scotland.

9. Give an outline of the life of the Earl of Surrey (Henry Howard), and mention our obligations to him in a literary point of view.

10. Give an outline of the fortunes and fate of Sir Walter Raleigh, and some account of his literary productions.

11. (1) Give the substance of Dr. Craik's remarks on Young's Night Thoughts and Thompson's Seasons. (2) Also, his exposition of this, "His (Spencer's) poetry is the most poetical of all poetry."

ENGLISH LITERATURE.

FRIDAY, APRIL 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the names of the principal historians of England, with some account of their works, and particularly of their works on the Commonwealth.

2. Which are the English poets, from the sixteenth century till the present time, that have written poems of the class denominated allegorical?—and give some account of the principal works of that class.

3. What are the peculiar excellencies of Bacon's Essays? Give the substance of the Essay on Custom and Education.

4. Mention the great Essayists of the time of Queen Anne, and give some estimate of their labours in a literary and a moral point of view.

5. What is the subject-matter of Drayton's Polyolbion, its versification and the peculiarities that distinguish it.

6. Give an analytical outline of the Four Books of Paradise Regained.

7. Describe the poetical entertainment denominated "The Masque," and refer to some specimens of it.

8. Which were the principal theological writers of the seventeenth century? Give some brief account of them.

9. Give the substance of Dr. Craik's criticism on Young's Night Thoughts and Thompson's Seasons.

10. State the condition of the controversy in regard to Bacon and the plays of Shakespeare.

11. Mention the principal English Satirical compositions in verse.

12. Give an account of the growth of the Novel, from the beginning of the eighteenth century.

LOGIC AND MENTAL AND MORAL PHILOSOPHY.

INTERMEDIATE EXAMINATION.

LOGIC.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Define what is meant by Term, Proposition, and Syllogism respectively.

2. Distinguish (*a*) Singular and Common, (*b*) Concrete and Abstract, Terms, giving an example of each.

3. Of the following Terms state which are, and which are not, Connotative:—Quebec, the oldest city in Canada, Alexander the Great, John Milton, the author of Paradise Lost, River, Tiber.

4. State the Rules of Logical Definition.

5. Name and distinguish the three parts of which a Proposition is composed.

6. Point out these three parts in each of the following Propositions:—(*a*) "That on which a man has labored he will not willingly destroy;" (*b*) "He is the rich man who is content with what he has."

7. What is meant (*a*) by the Quantity, (*b*) by the Quality, of a Proposition?

8. Give the sign which denotes the Quantity and Quality of each of the following Propositions:—

(*a*) Not a life was lost;

(*b*) Most of the crew were saved;

(*c*) Some propositions are self-evident;

(*d*) The whole of these statements are questionable.

9. Distinguish Contrary and Contradictory Propositions, explaining the inferences which can be drawn (*a*) from one Contrary, (*b*) from one Contradictory, to another.

10. Distinguish the different Terms and Propositions in the following Syllogism:—"The avaricious man is not contented; and therefore he is not truly rich, for the truly rich man is contented."

11. (*a*) What term must be distributed in the premises of every Syllogism? (*b*) Explain the reason.

12. What additional term must be distributed in the premises, (*a*) when the conclusion is negative, (*b*) when it is universal?

13. (*a*) Name the Mood and the Figure of the Syllogism in Question 10. (*b*) Reduce it to the First Figure.

14. Throw into the form of a Dilemma the following argument:—If the Epistle attributed to Barnabas be genuine, it is a part of Scripture, and, if spurious, it is the work of some forger of a later age.

15. (*a*) Explain the Fallacies of Undistributed Middle and Illicit Process. (*b*) To what class of Fallacies do they belong?

16. Explain each of the following Fallacies, and specify the class to which it belongs:—

(*a*) The contented man is truly rich; but the avaricious man is not contented; and therefore he is not truly rich.

(*b*) All truly wise men are lovers of virtue; and those who love Christ are lovers of virtue; therefore they are truly wise.

(*c*) I can afford this, that, or the other, expense; and therefore I need not deny myself any of them.

(*d*) Some philosophers have deduced the Moral Law from the obligation of the Divine Commands, and then have deduced the obligation of the Divine Commands from the Moral Law.

THIRD YEAR:

MORAL PHILOSOPHY.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

I. LECTURES.

1. What are the Subjects considered under Ethics Proper?

2. What is the general distinction between Epicurean and Stoical Theories?

3. Point out the difference between earlier and later Utilitarians in reference to the valuation of Pleasures.

4. Sketch, in general outline, the Utilitarianism of the present day.

5. Distinguish the sphere of Law from that of Morals.

6. Distinguish (*a*) Social and Personal Duties, (*b*) the two subdivisions of Social Duties.

7. What is the Supreme Right?

8. (*a*) Distinguish the two classes of Rights. (*b*) What Rights are inalienable; what, transferable? (*c*) What are the objects of Real Rights? (*d*) How may such Rights be first acquired; how transferred?

II. STEWART'S OUTLINES.

1. Define Action, (*a*) as properly applied, (*b*) as applied in ordinary discourse.

2. Distinguish Appetites and Desires.

3. (*a*) By whom were our Moral Ideas referred to a Sense; by whom, to the Reason? (*b*) How far may these two theories be harmonized by proper definitions of Sense and Reason?

4. What forms (*a*) the Beauty of Virtue, (*b*) the Deformity of Vice?

5. Point out the illustrations, which the Universe furnishes, of the Wisdom and Unity of the Creator.

6. (*a*) State the doctrine of Optimism in both its forms. (*b*) Sketch Stewart's defence of Optimism as maintained by himself.

7. Criticise the distinction which Hume draws between Justice and the other Virtues.

8. Define Virtue, and explain Aristotle's paradoxical assertion with regard to its nature.

B. A. ORDINARY EXAMINATION.

MURRAY'S OUTLINE OF HAMILTON'S PHILOSOPHY.

FRIDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Explain the distinction between Empirical or Historical and Philosophical or Scientific knowledge. (*b*) Why is Philosophy, in its strictest sense, limited to the Science of Mind?

2. State the classification of the Philosophical Sciences.

3. Define the terms Subject and Object.

4. (*a*) Distinguish the two points of view in which the Deliverances of Consciousness may be regarded. (*b*) Concerning which of these alone is doubt possible; and why?

5. Explain what is meant by a Mental Power, distinguishing the terms Faculty and Capacity.

6. State the classification of the Cognitive Faculties.

7. (*a*) Distinguish Sensation Proper and Perception Proper. (*b*) State the law of their relation. (*c*) Illustrate that law by comparing, not only the different senses, but the different impressions of the same sense.

8. Describe the systems of (*a*) Realism, Natural and Hypothetical, (*b*) Idealism, Absolute and Cosmothetic.

9. State the different theories to account for Habits and Dexterities.

10. Distinguish the Primary and Secondary Laws of Reproduction.

11. State the Primary Laws of Reproduction, both General and Special.

12. (*a*) Explain Nominalism and Conceptualism. (*b*) Show that the latter arises from an ambiguity of terms.

13. Define the Unconditioned, distinguishing its two extremes.

14. Illustrate the Law of the Conditioned, in its application to Time, Space, and Degree.

15. Show that the Law of the Conditioned explains the Principle of Causality.

B. A. ORDINARY EXAMINATION.

STEWART'S OUTLINES OF MORAL PHILOSOPHY.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Define Action, (*a*) as properly applied, (*b*) as applied in ordinary discourse.

2. Distinguish Appetites and Desires.

3. Describe some of the forms in which the Desire of Power is exhibited

4. Distinguish (*a*) Instinctive and Deliberate Resentment, (*b*) Indignation, (*c*) Passion.

5. In what Active Principles is the constitution of man analogous to that of the brutes?

6. In what respects does the Reason of man render his nature essentially different from that of the brutes?

7. By whom were our Moral Ideas referred to a Sense; by whom to the Reason?

8. How far may these two theories be harmonized by proper definitions of Sense and Reason?

9. What forms (*a*) the Beauty of Virtue, (*b*) the Deformity of Vice?

10. Discuss the theory that Moral Obligation arises from the Command of God.

11. Point out the illustrations which the Universe furnishes of the Wisdom and Unity of the Creator.

12. State the doctrine of Optimism in both its forms.

13. Sketch Stewart's defence of Optimism as maintained by himself.

14. Estimate the argument for Immortality derived from the nature of the Mind.

15. (*a*) Define Justice, both in its wider and in its stricter application. (*b*) Criticise the distinction which Hume draws between Justice and the other virtues.

16. Define Virtue, and explain Aristotle's paradoxical assertion with regard to its nature.

EXAMINATION FOR HONOURS.

THIRD YEAR.

ANCIENT GREEK PHILOSOPHY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. What are the periods into which the history of Greek Philosophy was divided, (*a*) in the Lectures, (*b*) by Schwegler?

2. (*a*) Mention what facts are known with regard to Thales. (*b*) State his philosophical theory, pointing out the facts by which he may have been led to it. (*c*) Wherein consists the significance of Thales in the history of philosophy?

3. State the theories which were maintained by subsequent philosophers of the school to which Thales belonged.

4. (*a*) To what school did Zeno (the earliest of that name) belong? (*b*) Explain the general drift of his famous arguments. (*c*) Give an outline of each.

5. "Everything is and is not" (*a*) Of whose philosophy is this statement a brief summary? (*b*) Explain the meaning of this statement.

6. Sketch the philosophy of Democritus, (*a*) in its general principle, (*b*) in its applications to Physics, Psychology, and Ethics.

7. (*a*) What was the origin of the Megaric School? (*b*) Describe the general character of its doctrines.

8. (*a*) Mention what is known regarding the founder of the Cynic School. (*b*) What was the origin of its name? (*c*) Mention any peculiar Logical doctrines of the school. (*d*) Describe its fundamental Ethical doctrine.

9. (*a*) Sketch the Dialectics of Plato. (*b*) Explain its general connection with his Physics and his Ethics.

10. (*a*) Explain the names by which the schools of Plato and of Aristotle respectively were known. (*b*) Mention some of the principal successors of Plato. (*c*) Describe the philosophical character of his later, as contrasted with his earlier, successors.

11. Sketch the Ethics and the Politics of Aristotle.

12. Sketch the Ethics of Epicurus, explaining the relation in which they stand to the other parts of his philosophy.

THOMSON'S OUTLINE OF THE LAWS OF THOUGHT.

WEDNESDAY, APRIL 25TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain what is meant by a Notion or Cognition?

2. Distinguish (*a*) Confused and Distinct, (*b*) Adequate and Inadequate, Notions.

3. Explain (*a*) the three Powers of a Conception, (*b*) the three corresponding Logical Processes.

4. Define the principal divisions of Nouns or Names, giving an example of each division.

5. State the various theories on the Nature of General Notions.

6. (*a*) What is the common division of Judgments as to Relation? (*b*) Compare it with Thomson's doctrine of Relation in Judgments.

7. Compare Thomson's Table of Judgments (*a*) with that of the older Logicians, (*b*) with that of Sir William Hamilton.

8. Explain the threefold import of a Judgment according to the view in which it is interpreted.

9. (*a*) Explain what is meant by Immediate Inference. (*b*) Describe its principal forms.

10. (*a*) How many Figures of the Syllogism does Thomson recognize; (*b*) Explain his reason?

11. Explain the Canon:—"The *worst* relation of the two terms with a third, that may be established in the premises, shall be expressed in the conclusion."

12. Give the Special Canon of each Figure.

13. Express in Hamilton's notation the Mode IUI of the Second Figure.

14. Define Prosyllogism and Episyllogism.

B. A. EXAMINATION FOR HONOURS.

THURSDAY, MARCH 29TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

I.—Plato's Theætetus.

1. State what is known regarding the name by which this dialogue is entitled.

2. State the precise drift of the question discussed in the dialogue.

3. Sketch, in general outline, the course of the discussion.

4. What evidence, extraneous to this dialogue, can be adduced to show that the first doctrine maintained by Theætetus was a familiar theory in ancient Greece?

5. State the final objection which is urged in the dialogue against this theory, and show wherein the objection anticipates modern speculations

6. Give the statement which the dialogue contains of the celebrated Protagorean doctrine.

7. Notice and criticise some of the objections which are brought against this doctrine in the dialogue.

8. (*a*) Mention some of the dialectical quibbles which appear in the dialogue. (*b*) What contemporary school do these especially represent?

II. Mediæval Philosophy.

1. State the main facts in the life of Boethius.

2. Name (*a*) his principal work, (*b*) any of his subordinate works, (*c*) some works which have been uncritically ascribed to him.

3. (*a*) What were the subjects of the two great theological controversies of the ninth century? (*b*) Name the two doctors respectively associated with these controversies.

4. (*a*) Who was the author of *De Divisione Naturæ?* (*b*) Explain the fourfold division of Nature, on which the work proceeds.

5. (*a*) Sketch the life and character of Anselm. (*b*) Name his principal works. (*c*) State his argument against atheism. (*d*) Name a contemporary critic of this argument, and state some of his criticisms

6. Sketch the life of Albertus Magnus.

7. Distinguish his character from that of his great pupil and friend.

8. (*a*) By what title was the latter distinguished? (*b*) Name and describe briefly his great work.

MODERN PHILOSOPHY.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Describe the two great antithetical tendencies of modern philosophy. (*b*) Sketch the history of speculation in the direction of both these tendencies during the different periods distinguished in the lectures.

2. Sketch, in outline, Locke's argument against Innate Ideas.

3. Mention the most prominent writers in England and France, whose speculations exhibit the influence of Locke's Empiricism.

4. Notice some of the main points in the philosophy of Condillac and of Bonnet respectively.

5. (*a*) State Descartes' argument for the existence of a Supreme Being. (*b*) Explain the position which this argument holds in his philosophy.

6. State Descartes' conception of Matter and Mind, and of the physical and mental sciences, respectively.

7. Describe the system of Spinoza, showing that it is a development of Cartesian conceptions.

8. Sketch, in outline, the philosophy of Wolff, in reference both to its logical method, and its main divisions.

9. (*a*) What thinker forms the transition between the earlier and later periods of modern philosophy? (*b*) Mention the most prominent points in his speculations.

10. Describe the German Illumination, mentioning the most prominent names connected with it.

11. (*a*) State the main facts in the life of Kant. (*b*) Describe the general drift of the three great works in which his philosophy is summed up.

12. Write a brief sketch of the position of Empiricism and Idealism at the present day.

MILL'S LOGIC.

MONDAY, APRIL 16TH—MORNING, 9 TO 12.

Examiner.....J. CLARK MURRAY, LL.D.

1. State Mill's doctrine with regard to the import (*a*) of Names, (*b*) of Propositions.

2. State his theory on the nature (*a*) of Inference, (*b*) of General Propositions.

3. Define Induction, distinguishing it (*a*) from what the common text-books on Logic call Perfect Induction, (*b*) from the so-called Inductions in Mathematics, (*c*) from the Colligation of Facts.

4. (*a*) What is meant by a Law of Nature? (*b*) Show that the Laws of Nature are merely varieties of a General Law or Axiom, and (*c*) that this Axiom is the Ground of Induction.

5 (*a*) State Comte's objection to the word Cause. (*b*) Explain how far this objection agrees or conflicts with Mill's own doctrine on the subject.

6. State the Canons of the Methods of Experimental Inquiry.

7. (*a*) Describe the different stages of the Deductive Method. (*b*) Explain the circumstances in which that method is required. (*c*) Show that, in such circumstances, purely Inductive Methods are inapplicable.

8. (*a*) Define an Empirical Law. (*b*) Illustrate by an example. (*c*) Distinguish two kinds of Empirical Laws. (*d*) To which kind is the term more strictly applicable?

9. (*a*) On what kind of Induction does the Law of Universal Causation rest? (*b*) What are the grounds of its present certainty, and (*c*) the limits of the reliance due to it?

10. Explain Mill's classification of Fallacies.

11. Explain the sense in which Mill holds that human actions are subject to the Law of Causality.

12. (*a*) Define Ethology. (*b*) Show that its Laws must be studied deductively, not by observation and experiment.

KANT'S CRITIQUE OF THE PURE REASON.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,..... ..... J. CLARK MURRAY, LL.D.

1. State and explain the General Problem of the Pure Reason.

2. Distinguish (*a*) the two sources of human knowledge, (*b*) the corresponding divisions of the Transcendental Elementology.

3. Explain what is meant by (*a*) the Empirical Reality, (*b*) the Transcendental Ideality, of the Forms of the Sensibility.

4. Distinguish the two divisions of the Transcendental Logic.

5. (*a*) What is a Pure Concept of the Understanding? (*b*) What is the clue to the discovery of such Concepts? (*c*) Give the Table of those Concepts.

6. Explain the general connection between the Principles of the Pure Understanding and the Categories.

7. State the Analogies of Experience, exhibiting their connection with the Categories to which they correspond.

8. Define Noumenon (*a*) negatively, (*b*) positively, showing that for us it must always be (*a*) a negative and (*b*) a problematic concept.

9. Give the system of Transcendental Ideas, showing how they are derived from the Pure Reason.

10. State the several Theses and Antitheses which form the Antinomy of the Pure Reason.

11. Sketch the solution of the several Antinomies.

12. (*a*) State the several Arguments for the Existence of a Supreme Being. (*b*) Show that one of them is implied in all the others. (*c*) Explain the fallacy of that argument.

KANT'S THEORY OF ETHICS.

MONDAY, APRIL 23RD :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the transition from the common rational knowledge of Morality to the philosophical.

2. What constitutes the Supreme Principle of Morality?

3. (*a*) What is the source of all Spurious Principles of Morality? (*b*) Give a classification of such spurious principles.

4. Explain the source of the Antinomy of the Pure Practical Reason.

5. Show that Primacy must be ascribed to the Pure Practical Reason in its union with the Pure Speculative Reason.

6. Explain how the Antinomy of the Pure Practical Reason may be solved.

7. Point out the wise adaptation of man's Cognitive Faculties to his Practical Destination.

8. (*a*) What is meant by the Methodology of the Pure Practical Reason, as distinguished from that of the Speculative Reason. (*b*) Explain the Method which it enjoins.

9. How is the Radical Evil in human nature to be conceived?

10. (*a*) Under what different heads may man's Original Capacity for Good be regarded? (*b*) Explain how this Capacity may be restored to its full power.

FRENCH, GERMAN AND HEBREW.

FIRST YEAR.

FRENCH.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Translate into English :—

Frosine. Hé, c'est toi, mon pauvre La Flèche? D'où vient cette rencontre?

La Flèche. Ah! ah! c'est toi Frosine! Que viens-tu faire ici?

Frosine. Ce que je fais partout ailleurs; m'entremettre d'affaires; me rendre serviable aux gens et profiter, du mieux qu'il m'est possible, des petits talents que je puis avoir. Tu sais que dans ce monde, il faut vivre d'adresse, et qu'aux personnes comme moi le ciel n'a donné d'autres rentes que l'intrigue et l'industrie. (*a*).

La Flèche. As-tu quelque négoce avec le patron du logis?

Frosine. Oui; je traite pour lui quelque petite affaire dont j'espère une récompense.

La Flèche. De lui? Ah! ma foi tu seras bien fine, si tu en tires quelque chose; et je te donne avis que l'argent céans est fort cher.

Frosine. Il y a de certains services qui touchent merveilleusement.

La Flèche. Je suis votre valet, et tu ne connais pas encore le seigneur Harpagon. Le seigneur Harpagon est de tous les humains l'humain le moins humain, le mortel de tous les mortels le plus dur et le plus serré. Il n'est point de service qui pousse sa reconnaissance jusqu'à lui faire ouvrir les mains. De la louange, de l'estime, de la bienveillance et de l'amitié, tant qu'il vous plaira, mais de l'argent, point d'affaires.

MOLIÈRE, *l'Avare*, A. II, sec. v.

2. (*a*). How would you qualify that *industrie?* In what French expression does that word enter with a bad meaning?

(*b.*) Translate :—Chatouiller les cœurs des hommes. J'ai commerce chez elles. Il faut être folle fieffée. Vous avez grâce à tousser. Gardez bien de gâter vos habits. Ne vous allez pas vous aviser de lui faire mauvais visage.

3. Write out the character of Valère in the comedy of *l'Avare*.

4. Explain fully the two constructions used to translate *must* into French. Give two examples of each.

5. Write in full the Preterite Definite, the Future and Present Subjunctive of *acquérir, naître and venir.*

6. Write in full the four forms of *falloir* and *y avoir* in the future.

7. What difference is there in the meaning of *convenir* when it is conjugated with *avoir* or with *être?* Give two examples.

8. To what verbs do *vit* and *suis* belong? In what tenses are they in those verbs? Give the different meanings.

9. When do proper names take the mark of the Plural in French? Give two examples.

10. Give the five rules to write the plural of compound nouns in French. Give examples.

11. Translate into French :—

Rainbows are formed by the reflexion of the rays of the sun in the clouds. Snow-drops bear flowers in the midst of the rigours of the winter. Give me a wine glass, and a soup spoon. The hay market is on your left, and the horse-fair is before you. He did put the knife-handle in his sleeve. The highways are bordered with laurels, pomegranates, jessamines and other trees which are always green, and always in bloom. Self-love and pride are always the offspring of a weak mind. Truth, notwithstanding prejudice, error and falsehood, clears its way and penetrates at last. She charms everybody by her kindness and her gentleness. It is during youth that we must lay the foundations of an honorable and happy life. The sheep quietly feed on the grass under the care of the shepherd and the dogs. The moon always revolves around the earth. Paper was invented towards the end of the fourteenth century; and printing towards the middle of the ffteenth century.

INTERMEDIATE EXAMINATION.

FRENCH.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiners,..... ..... { P. J. DAREY, M.A., B.C.L. / PROF. M. MILLER.

1. Translate into French :—

" Every man," said Imlac, " may, by examining his own mind, guess what passes in the minds of others : when you feel that your own gaiety is counterfeit, it may just lead you to suspect that of your companions not to be sincere. Envy is commonly reciprocal. We are long before we are coun-

vinced that happiness is never to be found ; and each believes it possessed by others, to keep alive the hope of obtaining it for himself. In the assembly where you passed the last night, there appeared such sprightliness of air and volatility of fancy, as might have suited beings of a higher order, formed to inhabit serener regions inaccessible to care or sorrow ; yet believe me, prince, there was not one who did not dread the moment when solitude should deliver him to the tyranny of reflexion." "This" said the prince, "may be true of others, since it is true of me ; yet, whatever be the general infelicity of man, one condition is more happy than another, and wisdom surely directs us to take the least evil in the *choice of life*."

JOHNSON, *Rasselas*, chap. XVI.

2. Translate into English :—

BURRHUS. Je ne m'étais chargé dans cette occasion
Que d'excuser César d'une seule action ;
Mais puisque, sans vouloir que je le justifie,
Vous me rendez garant du reste de sa vie,
Je répondrai, madame avec la liberté
D'un soldat qui sait mal farder la vérité.
Vous m'avez de César confié la jeunesse,
Je l'avoue ; et je dois m'en souvenir sans cesse ;
Mais vous avais-je fait serment de le trahir,
D'en faire un empereur qui ne sût qu'obéir ?
Non. Ce n'est plus votre fils, c'est le maître du monde.
J'en dois compte, madame, à l'empire romain,
Qui croit voir son salut ou sa perte en ma main.
Ah ! si dans l'ignorance il le fallait instruire,
N'avait-on que Sénèque et moi pour le séduire ?
Pourquoi de sa conduite éloigner les flatteurs ?
Fallait-il dans l'exil chercher des corrupteurs ?
La cour de Claudius, en esclaves fertile,
Pour deux que l'on cherchait en eût présenté mille,
Qui tous auraient brigué l'honneur de l'avilir :
Dans une longue enfance ils l'auraient fait vieillir.

RACINE, *Britannicus*, A. I sc. 2.

3. State the genealogy of Nero. Who was the rightful heir to the throne after the death of Claudius ? Point out the means which Agrippina employed to make her son ascend the throne. Why does Nero seek to destroy Britannicus ?

4. Explain the meanning of :

a. ALBINE. Enfin Néron naissant
A toutes les vertus d'Auguste vieillissant.

AGRIPPINE. Il commence, il est vrai, par où finit Auguste ;
Mais crains que, l'avenir détruisant le passé,
Il ne finisse ainsi qu'Auguste a commencé.

b. AGRIPPINE. Quand je devrais *du ciel hâter l'arrêt fatal*,
Néron, l'ingrat Néron.....

c. Thraséas au sénat, Corbulon dans l'armée,
Sont encore *innocents, malgré leur renommée,*

d. Explain further the words: *faisceaux, affranchis, and vestale.*

5. What works did Joinville, Amyot, Montaigne, Régnier, Jodelle and Boileau write ? When did those authors live ?

6. In what years were Pierre Corneille, Jean Racine, and Molière, born, and when did they die ? Give an account of their lives up to the time when their names as poets were fairly established. Name the works by which they established their reputation. In what kind of writings did each of them excel ? Name the best piece of each of them.

6. Explain grammatically :—

a. Il m'écarta du trône *où* je m'allais placer.

b. Ne peut-il faire un pas qui ne vous soit suspect ?

c. Eclaircissez le trouble *où* vous jetez mon âme

d. Vous êtes jeune encore et *l'on* peut vous instruire

7. Explain fully the difference between *en* and *dans*. Illustrate your answer by two examples. When is *in* translated by *à*? Give an example.

8. Translate into French : Short reckonings make long friends. Birds of the same feather flock together. To carry coals to Newcastle. Might overcomes right. Fair words break no bones. *And in English* : Vider un différent. Il s'en prit à moi. Payer de sa personne. Il est toujours bien mis. Passer de fil en aiguille.

THIRD YEAR.

(ARTS AND SCIENCE).

FRENCH.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

Translate into English :—

Une des singularités de Paris est de réunir vingt populations complétement différentes de mœurs et de caractère. A côté des bohémiens du commerce et de l'art, qui traversent successivement tous les degrés de la fortune ou du caprice, vit une paisible tribu de rentiers et de travailleurs établis dont l'existence ressemble au cadran d'une horloge sur laquelle la

même aiguille ramène successivement les mêmes heures. Si aucune autre ville n'offre des vies plus éclatantes, plus agitées, aucune autre ne peut en offrir de plus obscures et de plus calmes. Il en est des grandes cités comme de la mer; l'orage ne trouble que la surface; en descendant jusqu'au fond vous trouvez une région inaccessible au mouvement et au bruit. Pour ma part je campais au bord de cette région sans l'habiter véritablement. Placé en dehors des turbulences publiques, je vivais réfugié dans mon isolement, mais sans pouvoir détacher ma pensée de la lutte. J'en suivais de loin tous les incidents avec bonheur ou avec angoisse; je m'associais aux triomphes ou aux funérailles! Pour qui regarde et qui sait, le moyen de ne pas prendre part! Il n'y a que l'ignorance qui peut rendre étranger à la vie extérieure; l'égoïsme ne suffit point pour cela.

Le Philosophe sous les tois.

2. When are the pronouns *I*, *thou*, *he*, *they*, rendered in French by *moi*, *toi*, *lui*, *eux?* Give three examples.

3. When does the pronoun *le* change into *la* or *les*, and when does it remain invariable? Give four examples.

4. Who were the greatest orators of France at the end of the 17th century? What works have they published?

5. Who was Descartes? What scientific discoveries did he make? What great literary work did he publish? Where did he live? And where did he die?

6. Translate into French:—

The castle clock struck twelve. At that moment the buzzings of the crowd ceased, and a little man, dressed in a green uniform, with white trousers, and wearing riding-boots, appeared on a sudden, keeping on his head a three-cornered hat as fascinating as he was himself. The broad red riband of the Legion of Honour floated on his breast. A small sword was at his side. He was perceived by all eyes and at once. Immediately, cries of: Long live the Emperor! were uttered by the enraptured multitude.— Their dress was such as might not bring upon them the suspicion of having anything to conceal; yet the prince, wherever he came, expected to be obeyed, and the princess was frightened because those that came into her presence did not prostrate themselves before her.

B. A. ORDINARY EXAMINATION.

FRENCH.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiners,..... { P. J. DAREY, M.A, B.C.L. / PROF. M. MILLER.

1. Traduisez Shakespeare, "As you like it," Act I., Scene 2. from: Cel. *Young gentleman*, jusque *when I have made it empty*.

2. Traduisez Boileau, "L'Art poétique," chant III., from *D'un air plus grand encore*, jusqu'aux mots: *C'est là ce qui surprend, frappe, saisit, attache.*

3. Donnez un aperçu de la vie de Molière. Quelles sont les meilleures comédies de Molière? Quel but Molière s'est-il proposé dans ses comédies et par quels moyens y arrive-t-il? Quel défaut expose-t-il dans le Misanthrope? Indiquez les occasions où la conduite d'Alceste n'est pas raisonnable.

4. Donnez les règles qui se rapportent aux mots soulignés des phrases suivantes:

a. Les acteurs *laissant* le masque antique.

b. On chassa ces docteurs *prêchants.*

c. Dieu nous a *distingués* des autres animaux par le don de la parole.

d. Ils se sont *blessé* les doigts.

e. Ils se sont *blessés* à la tête.

f. Cette nuit je les ai *vus* arriver.

g. Les paysages que j'ai *vu* dessiner.

h. Fermez la cage *avant que* l'oiseau *ne sorte.*

i. Il a fermé la *porte avant que* son frère *fût rentré.*

j. J'aime à *lui* voir verser des pleurs pour un affront.

k. Je *l'*ai vu faire bien des sottises.

5. Comparez l'origine et le développement du théâtre chez les Grecs avec les premiers commencements et le perfectionnement du théâtre chez les Français.

6. Quels sont les quatre prosateurs principaux du dix-huitième siècle? Quels écrits ont-ils publiés? Quel est le plus grand poëte de ce siècle? Citez quelques-unes de ses pièces de poésie.

7. Qu'est-ce qu'on entend par *école romantique* en France? Qui est-ce qui a été le chef de cette école? Quels sont les trois principaux historiens, les trois plus grands poëtes, et les trois romanciers les plus célèbres du dix-neuvième siècle en France? Quels sont leurs ouvrages les plus remarquables?

JUNIOR CLASS.

GERMAN.

FRIDAY, APRIL 20TH:—AFTERNOON, 2 TO 5.

Examiner,..... C. F. A. MARKGRAF, M.A.

1. Translate into English:—

Auf einer großen Weide gehen
Viel tausend Schafe silberweiß;
Wie wir sie heute wandeln sehen,
Sah sie der allerältste Greis.

Sie altern nie, und trinken Leben
Aus einem unerschöpften Born,
Ein Hirt ist ihnen zugegeben
Mit schön gebog'nem Silberhorn.

Er treibt sie aus zu goldnen Thoren,
Er überzählt sie jede Nacht,
Und hat der Lämmer keins verloren,
So oft er auch den Weg vollbracht.

Ein treuer Hund hilft sie ihm leiten,
Ein muntrer Widder geht voran,
Die Heerde, kannst du sie mir deuten?
Und auch den Hirten zeig' mir an.

Schiller.

Der König, der sein liebes Kind vor dem Ausspruche bewahren wollte, ließ den Befehl ausgehen, daß alle Spindeln im Königreiche sollten abgeschafft werden. An dem Mädchen aber wurden die Gaben der weisen Frauen sämmtlich erfüllt, denn es war so schön, sittsam, freundlich und verständig, daß es Jedermann, der es ansah, lieb haben mußte. Es geschah, daß an dem Tage, wo es gerade fünfzehn Jahr alt ward, der König und die Königinn nicht zu Haus waren, und das Fräulein ganz allein im Schloß zurückblieb. Da ging es aller Orten herum, besah Stuben und Kammern, wie es Lust hatte, und kam endlich auch an einen alten Thurm. Es stieg eine enge Treppe hinauf und gelangte zu einer kleinen Thüre. In dem Schloß steckte ein verrosteter Schlüssel, und als es umdrehte, sprang die Thür auf, und saß da in einem kleinen Stübchen eine alte Frau und spann emsig ihren Flachs. „Ei du altes Mütterchen," sprach die Königstochter, „was machst du da?" —„Ich spinne," sagte die Alte und nickte mit dem Kopfe. „Wie das Ding so lustig herumspringt!" sprach das Mädchen, nahm die Spindel und wollte auch spinnen. Kaum hatte sie aber die Spindel angerührt, so ging der Zauberspruch in Erfüllung und sie stach sich damit.

Gebrüder Grimm.

2. State rules relating to the modification of the radical vowel in the Plural of substantives.

3. Give instances of nouns the gender of which may be determined by their termination.

4. Decline in the Sing. and Plural:—this large tree; my little nephew; her only (einzig) daughter; the nearest village.

5. *a.* Give a tabular view of the declension of adjectives, when they are preceded by *no declinable* word. (*b*) Give the Positive and Comparative of größt, am eheſten, ſtärkſt, am meiſten, höchſt, am nächſten.

6. Write out the 2nd Sing. and the 1st Plural of the Present, Imperfect, Perfect, Pluperfect, First and Second Futures, of the Indicative, of denken, ausſuchen, and verſtehen.

7. *a.* Give the irregular forms of:—fangen, fallen, laufen, frieren, kommen, zerreißen, werden, dürfen, finden.

b. Parse, and give the Present Infinitives of:—fuhr, boget, aufgeſtanden, ſchriebſt, zerbrach, ritten, nimmt, ſaß, gewandt, rieth, mochtet, geſungen.

8. *a.* State the case (or cases) governed by the following prepositions:—über, ſeit, durch, hinter, gegen, zu, unter, nach, aus. *b.* When is '*with*' rendered by mit and when by bei? *c.* When is '*to*' expressed by the Dative, and when by a preposition.

9. State *six* conjuuctions which do not alter the construction of the sentence.

10. Translate into German:—

The rivers of many large countries are very small. There are many fir-trees and old oak-trees in our forests. This peasant's fields have no hedges. This is the young man whose letter I read out to you, when I saw you (the) last time. *Take* (lead) me to the cathedral of that old town. Did the merchant send you the wares which you have bought at his shop this evening? Who stands before the house? They are going into the field. We come from the country. We had taken off our hats and gloves. Is it already half-past one? No; it is only a quarter to twelve. The Emperor Charles the Fifth, of Germany, lived some centuries ago. The sailor jumped into the sea, and drew the boat on the shore.

SENIOR CLASS.

GERMAN.

FRIDAY, APRIL 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....C. F. A. MARKGRAF, M.A.

I. Translate into English*:—

Niemand glaube, die ersten Eindrücke der Jugend verwischen zu können!—Ist er in einer lieblichen Freiheit, umgeben von schönen und edlen Gegenständen, in dem Umgange mit guten Menschen aufgewachsen,—haben ihm seine Meister das gelehrt,—was er zuerst wissen mußte, um das Uebrige leichter zu begreifen,—hat er gelernt, was er nie zu verlernen braucht,—wurden seine ersten Handlungen so geleitet, daß er das Gute künftig leichter und bequemer vollbringen kann, ohne sich irgend etwas abgewöhnen zu müssen:—so wird dieser Mensch ein reineres, vollkommeneres und glücklicheres Leben führen, als ein Anderer, der seine ersten Jugendkräfte im Widerstand und im Irrthum zugesetzt hat.

Goethe.

Wer sollte nun nicht denken, die Tejer—in ihrem ersten Ursprunge Athenienser—so lange Zeit in Jonien einheimisch—Mitbürger eines Anakreon's—sollten auch in Thracien den Charakter eines geistreichen Volkes behauptet haben? Allein (was auch die Ursache davon gewesen sein mag) das Gegentheil ist außer Zweifel. Kaum wurden die Tejer zu Abderiten, so schlugen sie aus der Art. Nicht, daß sie ihre vormalige Lebhaftigkeit ganz verloren und sich in Schöpse verwandelt hätten, wie Juvenal sie beschuldigt. Ihre Lebhaftigkeit nahm nur eine wunderliche Wendung, und ihre Einbildung gewann einen so hohen Vorsprung über ihre Vernunft, daß es dieser niemals wieder möglich war, sie einzuholen.

Wieland.

Ich hebe mein Haupt kühn empor zu dem drohenden Felsengebirge, und zu dem tobenden Wasserstürze und zu den krachenden, in einem Feuermeer schwimmenden Wolken, und sage: „Ich bin ewig, und ich trotze eurer Macht! Brecht alle herab auf mich; und du Erde und du Himmel, vermischt euch im wilden Tumulte! und ihr Elemente alle, schäumet und tobet, und zerreibet im wilden Kampfe das letzte Sonnenstäubchen des Körpers, den ich mein nenne! mein Wille allein mit seinem festen Plane soll kühn und triumphirend über den Trümmern des Weltalls schweben; denn ich habe meine Bestimmung ergriffen, und die ist dauernder als ihr; sie ist ewig; und ich bin ewig wie sie."

Fichte.

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* Only two out of the three pieces given are to be translated.

II. Grammar.

1. (*a*) How may substantives be derived in German? Explain fully. (*b*) State the affixes which serve for the derivation of verbs, and give their respective meanings.

2. Enumerate the cases in which the Imperfect tense is used in German

3. When are the Future tenses used in German and not in English Give short examples.

4. When is the English prep. "*to*" rendered by a preposition in German?

5. Translate, and state rules in support of the *German* construction of the following sentences:—

He is in the habit *of saying*,

Life is short and art is long.

He was praised *for being* diligent.

Wir reiſen heute über acht Tage ab.

Ich kenne ſie ſchon ſeit vielen Jahren.

Was iſt da zu ſehen?

6. Translate two of the following sentences in the abridged form peculiar to German construction:—This is the place which is so beautifully described in that book. Allow me to introduce (vorſtellen) to you my old friend who has just returned from a long journey. All the persons assembled on the shore were waiting for the appearance (Erſcheinen) of the vessel.

III. Translate into German:—

— —The report of the archduke's danger had spread through the whole country. The priests and people were praying in all the churches for his delivery, and a crowd of people had assembled at the foot of the rock, upon which the prince could be seen distinctly. Whilst still praying the latter suddenly heard a noise behind him and looking round, he perceived a young peasant who said to him: "Gracious lord, be comforted! God still lives, who can and will save you. Follow me, and fear nothing!" With these words he led the way, penetrated through the thick bushes, sprang from stone to stone and after an hour's *time* safely arrived below with the archduke. *Everyone* (all) pressed round the beloved heir to the throne who was given to them a second time. But when they looked (round) for his deliverer, he was nowhere to be found; he *was lost* (had lost himself) in the crowd.

IV. Literature.

1. Write what you know of the two *Silesian* schools and their leaders.

2. Give the dates of the birth and death of *Wieland*. In what department of literature did he attain to great excellence? Name his principal works. Notice critically his "Oberon." What species of poetry did this poem call forth, and by what school, and to what extent, has it been cultivated?

3. When, and for what purpose, was the „Göttinger Dichterbund," founded? Who were the members of it?

4. Narrate the principal events of the life of *Goethe*. With what celebrated men did he associate at Weimar? Enumerate his principal dramas. Point out the merits of "Faust," and sketch the prominent characters of this play. Draw a comparison between the leading personages in the dramas of *Goethe* and those of *Schiller*.

JUNIOR CLASS.

HEBREW.

RUTH.—GRAMMAR.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....ARCHIBALD DUFF, M..A

1. Translate Ruth, Ch. I, vss. 1-5.
" " " 16-19.

2. Parse fully all the words of Ch. I, vs. 9, and Ch. II, vs. 3.

3. Explain the formation of אִשְׁתּוֹ, c. 1, v. 1; וַתִּשָּׂאר, v. 3; לָחֶת, v. 6; יִתֵּן, v. 9; הָיִיתִי, v. 12; מֵאַחֲרָיוּ, v. 16; יוֹסִיף, v. 17; יְבָרֶכְךָ, c. 2, v. 4; וַתֹּאמֶר, v. 7; הַמּוֹאֲבִיָּה, v. 2.

4. Explain the peculiar idioms in c. 1, v. 1, a; v. 4, b; v. 13, a; and 17, b.

5. Give a general outline of the natural classification of Hebrew nouns, giving examples of the so-called segholates.

6. Write out in full all the forms, sing. and plur., with and without suffixes, of פֶּלֶג and רֶכֶב.

7. Describe the classes and peculiarities of the פ verbs.

8. Write in full the Kal of מות, the Hiphil of סבב, the Piel of לקט, the Niphal of any פ guttural verb.

9. Sketch the history of the Hebrew language from its use as a popularly spoken language to its present use, pointing out peculiar changes with their causes. Especially give a table of original vowels corresponding to the present vowel points.

10. Translate into Hebrew:—And it was so that she calleth the one of her sons Boaz, and the second one she calleth "God-is-King," and she went to the land of Moab, and came into the fields of Moab. And they kept picking up among the stalks at the beginning of the reaping of barley. And they died both of them.

11. Translate into English:—

והנה משה בא מבית יהוה: ויאמר יברככם יהוה אלוהי ישראל: וישאו כל העם קולם ויבכו: ויברכם משה בשם יהוה: ברך את העם ואת הבית לחם: ויתנו לו לחם ויאכל:

SENIOR CLASS.

HEBREW.

ISAIAH. TRANSLATION. GRAMMAR.

MONDAY, APRIL 16TH:—MORNING, 9 to 12.

Examiner,.....ARCHIBALD DUFF, M.A.

1. Translate (*a*) Isa. I, 10–17.
   (*b*) " II, 5–11.
   (*c*) " V, 1–4.

2. Parse fully the words in ch. iv., v. 1.

3. Give instances of Isaiah's play upon words, and describe in general his rhetorical character, giving references to his writings so far as you can.

4. Give the probable dates of Isa. I. and Isa. II.-IV. with reasons.

5. Give all the forms sing. and plur., with and without suffixes, of בֵּן, יוֹם, עַם, תּוֹרָה, פֶּרֶס.

6. Write the Kal of ידע, the Piel of דבר, the Pual of הבש, the Hiphil of שמע

7. Write the Perfect Kal of אכל with the suffixes of the 3d pers. pronouns, masc. and fem. singular.

8. (*a*) What Hebrew words are translated by the English prepositions: *in*, *from*, *upon*, *between*, *behind*, *to*, *up to*, *with?*

(*b*) Point out the real nature of these words and the peculiarity of Hebrew thus illustrated.

(*c*) Describe the mode of use of these words (*a*) when they are in construction with other words.

9. Give an explanation of the origin and meaning of the construction with the so-called ו conversive.

10. Translate into Hebrew :—Σοφία Σειράχ I, 1, 4, 9 :—*πᾶσα σοφία παρὰ κυρίου καὶ μετ' αὐτοῦ ἐστὶν εἰς τὸν αἰῶνα.*
προτέρα πάντων ἔκτισται σοφία, καὶ σύνεσις φρονήσεως ἐξ αἰῶνος.
αὐτὸς ἔκτισεν αὐτὴν καὶ εἶδε καὶ ἐξηρίθμησεν αὐτὴν.

11. Translate into English :—

למה רגשו גוים ולאמים יהגו ריק: יתיצבו מלכי ארץ ורוזנים נוסדו יחד על יהוה ועל משיחו: יושב בשמים ישחק אדוני ילעג למו:

CHEMISTRY AND NATURAL SCIENCES.

FIRST YEAR AND IN APPLIED SCIENCE.

ELEMENTARY CHEMISTRY.

WEDNESDAY, APRIL 18TH:—MORNING, 9 to 12.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. How is Iodine prepared, and what are its properties?

2. If powdered glass, Fluor-spar and Hydric Sulphate are heated together, what chemical changes take place? Illustrate by equations

3. Point out the analogies existing between the members of the Chlorine group.

4. What are the properties of the gas produced when Copper and Hydric Sulphate are heated together?

5. What are the principal salts of Potassium, and what their sources?

6. By what tests may Copper and Zinc be detected when in solution?

7. What is the composition of the more important ores of Iron, and what the chemical changes which take place when they are smelted in the blast furnace?

8. Describe any method for the production of steel from pig iron.

9. What is the composition of blue vitriol, vermilion, philosophers' wool, German silver, and calomel?

10. By what tests may Orthophosphates be distinguished from Pyrophosphates and Metaphosphates?

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PRACTICAL CHEMISTRY.

SATURDAY, DECEMBER 16TH.

Examiner, ...PROFESSOR G. P. GIRDWOOD, M.D.

1. Describe the method of examination of an unknown substance so as to determine the base and acid present.

2. Carry out the answer to No. 1 in determining the substances (a) (b) (c) and (d), and detail the various steps taken in each case, specifying the means of identification.

3. Describe the process of taking specific gravity, giving examples in figures.

PRACTICAL CHEMISTRY.

SATURDAY, APRIL 21ST.

Examiner.....G. P. GIRDWOOD, M.D.

Ascertain the amount of acid and base in each sample marked A, B, C, respectively, describing the process employed.

INTERMEDIATE EXAMINATION.

BOTANY.

WEDNESDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Why is a soil deficient in Phosphates or Alkalis more or less barren ?

2. A plant is described as having flowers monopetalous, bell-shaped, limb five-cleft, anthers opening by pores at the apex, flower racemed. Explain and illustrate by figures the import of these characters.

3. Give as many illustrations as you can of Adnation, with explanations of the nature of some of them.

4. Describe the fertilization and germination of spores of Ferns.

5. How would you distinguish an Endogen from an Exogen ?

6. Trace any Canadian plant through the subdivisions of the classification from the species upward.

7. Describe an Anatropous Ovule, a Drupe, a Papilionaceous Corolla, and a Corymb.

8. Name some of the principal orders containing Timber Trees, and describe one of them, with illustrative genera and species.

9. How would you distinguish an Equisetum from a Lycopodium, and a Gymnosperm from an Angiosperm.

10. Describe the parts of an exalbuminous dicotyledonous seed, and the changes which take place in germination.

11. Describe any of the specimens exhibited, and refer them to their place in the system.

THIRD YEAR AND MIDDLE YEAR APPLIED SCIENCE.

ZOOLOGY.

WEDNESDAY, APRIL 18TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Characterise and classify the animals which produce the calcareous structures called, in the most general sense, Corals.

2. Name the classes of the Mollusca, beginning with the lowest, and characterise and sub-divide that which contains the greater part of the univalve shells.

3. A specimen of *Homarus* has growing on its crust individuals of the genera *Serpula*, *Balanus* and *Spirorbis*, classify these genera and describe the structure of one of them.

4. Divide the vertebrata into classes, and subdivide one of these into orders, with examples.

5. Describe the metamorphosis of an Entozoon or an Insect.

6. Describe the oral or masticatory organs of a Gasteropod, a Crustacean, and a Mandibulate Insect.

7. Describe any order of Invertebrata containing Canadian fossils, with illustrations of its genera.

8. State the division of the *Molluscoida* or *Heterobranchiata* into orders, with its grounds.

9. Characterise, and refer to their places in the system, any two of the following groups:—*Porifera*, *Pteropoda*, *Trematoda*, *Batrachia*, *Myriapoda*.

10. Describe and classify any order or genus of Mollusca represented in the museum.

11. Explain the nature and classification of the lowest Protozoa.

12. State what you know of the specimens exhibited.

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B.A. AND BA. APP. SC. ORDINARY EXAMINATION.

GEOLOGY.

WEDNESDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State and explain the data for the determination of the relative ages of stratified rocks, and the manner of applying them.

2. State the distribution of the Laurentian rocks in Canada, and explain their lithological character and subdivisions.

3. How is the Cambrian of England represented in Eastern America?

4. Explain the peculiarities of the Quebec group, and its geological relations.

5. How would you distinguish by fossils the Chazy or Trenton Limestone from the Niagara or the Lower Helderberg Limestone?

6. Describe the characteristic rocks of Montreal Mountain and their general arrangement.

7. Describe the Gaspé Sandstones, and the Lower Carboniferous of Bonaventure and New Brunswick, with their geographical and geological relations.

8. Characterise the principal subdivisions of the Mesozoic in Europe with their more distinctive fossils.

9. State the general distribution of Tertiary rocks in North America, and the localities in which particular members of this series are best represented.

10. Under what conditions were the Boulder clay and Leda clay deposited?

11. Describe the phenomena and effects of Glaciers or Volcanoes.

12. What are the Geological and Zoological or Botanical relations of *Ammonites*, *Phacops*, *Lepidodendron*, *Dendrerpeton*, *Cephalaspis*, *Columnaria*.

13. State what you know of the specimens exhibited.

THIRD YEAR EXAMINATION FOR HONOURS.

MINERALOGY.

FRIDAY, APRIL 20TH:—MORNING, 9 TO 12.

1. What are the primary and principal derived forms of the Monometric and Trimetric systems?

2. Explain columnar and granular structures, with examples from common minerals.

3. Give examples of the use of hardness and lustre in determining minerals.

4. Describe Orthoclase, Fluorite, Magnetite, Chalcopyrite, and state their chemical composition.

5. To what mineral species do Moonstone, Chrysoprase, Selenite, and Red Ochre belong? State the peculiarities by which these varieties are distinguished from others of the same species.

6. How would you most readily distinguish the following minerals:

Calc-spar from Arragonite.
Iron Pyrites from Copper Pyrites.
Tin-ore, Blende, and Galena from other metallic minerals.
Ores of Manganese from ores of Iron.
Talc and Chlorite from Mica.

7. Mention the principal metals which occur native, and describe one of them with its mode of occurrence.

8. Describe the mode of occurrence and geological relations of tin, rock-salt, and petroleum.

AFTERNOON, 2 TO 5.

10. Name the minerals exhibited, and state why you so name them.

ELEMENTARY LITHOLOGY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State in a tabular form the most natural mode of classifying Rocks.

2. Mention the leading Basic rocks of Volcanic origin, with their general composition.

3. What is Metamorphism? Give some examples of it.

4. Explain the disintegration of Granite under Atmospheric action, and the products which result from it.

5. Define Conglomerate, Grit, Shale, and distinguish the latter from Slate.

6. State what are the constituent minerals of Diorite, Elvanite, Basalt Mica Slate, Protogine.

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7. Explain Porphyritic and Amygdaloidal structures.

8. State some of the more important results of concretionary action in rocks, with examples.

9. What Metallic ores occur as considerable rock masses? State thein composition and mode of occurrence.

10. Describe the rocks exhibited, stating their constituent minerals, origi- and mode of occurrence.

B. A. EXAMINATION FOR HONOURS.

MINERALOGY.

THURSDAY, MARCH 29TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Name and describe the Sulphides of Lead, Mercury and Silver.

2. State the cases in which Hardness and Crystalline Form may be best employed in determining Minerals. Give some examples.

3. State the chemical and crystallographic differences of the Felspars, and their geological relations.

4. Describe chemically the more important Minerals of Barium and Strontium.

5. State the composition of Andalusite, Chlorite and Serpentine, and explain their occurrence in metamorphic rocks.

6. Describe fully the mode of occurrence and geological relations of Gold.

7. Describe some of the principal minerals of the Zeolite Series.

8. What are the distinctive characters of Limonite and Hematite, Pyrolusite and Manganite, Malachite and Azurite?

9. Describe fully Apatite with its modes of occurrence in Canada.

10. What are the chemical relations of Petroleum, Asphalt, Graphite?

11. Name and characterize one of the specimens exhibited.

LITHOLOGY AND PHYSICAL GEOLOGY.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State the distinction between Acidic and Basic rocks, and classify the ordinary Igneous rocks under these heads.

2. Name the more important Metamorphic rocks containing Orthoclase, Hornblende, Quartz, Mica. Describe one, with its geological and geographical relations in Canada.

3. Explain shortly the relations between the Oxides of Iron and Organic Matter as producing the colors of rocks.

4. Describe the modes of occurrence and lithological associations of Graphite, Spinel, Serpentine.

5. What are the constituent minerals and geological relations of Basalt, Dolerite, Hornblende Schist and Ophiolite?

6. State in tabular form the composition and classification of the following Rocks:—Argillite, Norite, Felsite, Hyperite, Quartzite,

7. Describe the structures indicated by the terms Oolitic, Amygdaloidal, Porphyritic, and explain their origin.

8. What are the causes of Combs, Horses and Selvages in Mineral veins?

9. Explain shortly the differences between the contents of mineral veins at the outcrop and at greater depths, and state their causes.

10. Mention the facts to be observed and noted in examining a natural section or exposure of rocks, and the methods of ascertaining and recording them.

11. State the methods of exploring for mineral veins, and ascertaining their distribution and value, with the difference between these methods and those employed in the case of minerals occurring in beds.

12. State some of the principal effects produced by Faults and the more important points to be observed with respect to them.

AFTERNOON, 2 TO 5.

EXAMINATION IN SPECIMENS.

Name the specimens exhibited, and state their constituent minerals or other matters, with their probable geological relations.

GEOLOGY AND PALÆONTOLOGY.

FRIDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. What is the litthological distinction between the Lower and Upper Laurentian, and what are the characteristic rocks of the Huronian in the typical district of Georgian Bay ?

2. Explain the chronological relations of the Acadian and Potsdam groups to the rocks of the Welsh and Bohemian Cambrian, and mention characteristic fossils.

3. State the geographical and geological position of the Trenton lime stone in Canada, and explain the structure and mode of depositio n ofdi--Gray Trenton of the vicinity of Montreal.

4. Explain the peculiarities of the geological structure of St. Helen's Island.

5. State the peculiar conditions of deposit indicated by the Salina group in Ontario and the Gypsiferous series in Nova Scotia.

6. Explain the connection of Underlays, Ironstones and Shelly Bituminous Limestones with Coal beds.

7. Enumerate the characteristic fossils of the Niagara Limestone and Lower Carboniferous Limestone.

8. State the geological position and probable American equivalents of the Llandeilo, Caradoc and Ludlow formations.

9. In what formations in Canada do the following genera occur and what is their precise range in geological time: *Calamites, Chonetes, Productus, Eurypterus, Conocephalites, Trinucleus, Cephalaspis, Dictyonema Orthis?*

10. Tabulate the sub-divisions of the Carboniferous and Permian in Europe ; and of the Devonian and Upper Silurian in America.

AFTERNOON, 2 TO 5.

EXAMINATION IN SPECIMENS.

Refer the specimens exhibited to their geological formations, and to their places in the Zoological and Botanical classifications.

GEOLOGY.

MONDAY, APRIL 23RD:—MORNING, 9 TO 12.

Examiner, ...J. W. DAWSON, LL.D., F.R.S.

1. Describe the Permian of England, and its equivalents in America.

2. Describe the Trias of Canada, and state the points of difference between it and that of Connecticut and Virginia.

3. State the geographical distribution of the Cretaceous in North America, and compare its rocks and fossils with those of England.

4. Discuss critically the questions involved in the origin of Oolite, Glauconite and Phosphatic nodules in the Mesozoic rocks.

5. State the various theories as to the causes and phenomena of the Glacial Period.

6. State the mode of occurrence of the earliest known human remains, and their relations to fossil mammalia.

7. Enumerate in Zoological series the principal fossils of the Canadian Post-pliocene.

8. In what formations would the following genera of fossils be expected to occur:—*Gryphea*, *Belemnitella*, *Nummulites*, *Amphitherium*, *Marsupites*, *Mosasaurus*, *Ceratites*, *Productus*, *Zeuglodon*, *Hipparion*.

9. Explain the mode of occurrence of Lignite and Amber in the Tertiary deposits.

10. Describe the Pleistocene deposits and Raised Beaches and Terraces of the St. Lawrence Valley.

AFTERNOON, 2 TO 5.

EXAMINATION IN SPECIMENS.

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DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

METEOROLOGY.

SATURDAY, DECEMBER 2ND:—AFTERNOON, 2 TO 4.

Examiner,.....C. H. MCLEOD.

1. State the corrections which are necessary in order that observations of the barometer made at different stations may be compared.

2. Explain the construction of the following instruments:

(*a*) The adjustable cistern barometer.
(*b*) The best form of self-registering barometer known to you.
(*c*) An hygrometer.
(*d*) The anemograph.

3, Give a classification of the different kinds of aurora.

4. Explain the formation of hoar-frost.

5. Under what circumstances cannot the mercurial thermometer be used.

SPHERICAL TRIGONOMETRY AND ASTRONOMY.

FRIDAY, FEB. 2ND:—11 A.M. TO 2 P.M.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove that the angles of any spherical triangle are the supplements of the sides of the polar triangle, first explaining accurately the meaning of this statement.

2. In any spherical triangle

$$Cos\ A = \frac{cos\ a - cos\ b\ cos\ c}{sin\ b\ sin\ c}$$

3. Prove

$$Sin\ \tfrac{1}{2}\ A = \sqrt{\frac{Sin\ (s-b)\ sin\ (s-c)}{sin\ b\ sin\ c}}$$

4. State Napier's rules for the solution of right-angled spherical triangles.

5. Find the astronomical time (at Greenwich) corresponding to 10h. 25m. a.m., mean time on February 2nd at a place in north latitude whose longitude is 73° 31′ W.

6. Find the declination of the Sun for the same time and place, as in question 5, if the registered declinations for February 2nd and February 3rd be, respectively, 16° 56′ 48″ and 16° 39′ 25″.

7. At the same time and place as above, the observed altitude of theSun's lower limb was 23° 30′, find the latitude of the place, the semi-diameter of the Sun being 16′ 16″, and the equation of time being 13′ 58″ to be subtracted from mean time. (Introduce the usual corrections.)

8. Find the latitude of a place in the northern hemisphere where the observed meridian zenith distance of a star which was north of the Zenith and above the Pole, was 11° 4′ 39″, its declination being 62° 33′ 27″.

9. Explain the method of finding the meridian by the greatest elongation of a circumpolar star, proving the formula required.

SPECIAL EXAMINATION IN MATHEMATICS AND NATURAL PHILOSOPHY.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. If a power be in equilibrium with a weight by means of a number of toothed wheels: prove that the power is to the weight as the continued products of the diameters of the pinions is to the continued product of the diameters of the wheels.

2. On a straight uniform bar weighing 5 lbs., and 5 ft. long, weights of 1, 2, 3, 4 lbs. are hung at the distances 1, 2, 3, 4 ft. respectively from the extremity. Find the distance from the centre of the bar of the fulcrum on which the whole will rest.

3. If the force of gravity at a place whose latitude is l, is given by the formula

$$g = 32.088\ (1 + .005133\ sin^2 l)$$

find the velocity acquired by a body in running down 427 ft. of an inclined plane at Bordeaux ($l = 44° 50′ 26″$ N.), the slope being 1 in 65.

4. Investigate a formula for determining the ratio of a volume of steam to the volume of water from which it is produced, the specific gravity of steam being .622.

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5. Three fluids whose specific gravities are 4, 5, 7 respectively are mixed together in the proportion of 5, 7, 9 volumes ; find the specific gravity of the mixture.

6. Describe the siphon manometer, and show fully how the scale is graduated.

7. If the elastic force of steam in a boiler be $5\frac{1}{2}$ atmospheres, calculate the pressure on a safety valve whose area is 5.4 square inches.

8. The distances between three objects A,B,C, are known, viz., $A\,B = 12$ miles, $B\,C = 7{\cdot}2$ miles, and $A\,C = 8$ miles : and at a station between A. and B, on the line joining them, from which the three objects were visibles the distance $A\,C$ subtended an angle of 107° 56′, required the distance of this station from C.

9. To find the height of a hill, a horizontal line, 1356 feet long, was measured on the same level with the base of the hill, and in the same vertical plane with its top ; the angles of elevation of the top of the hill were found to be 36° 50′ and 25° 36′ ; calculate the height.

JUNIOR YEAR.

SURVEYING.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiners,..... ..... { C. H. McLEOD, BAC. APP. SC. / ERNEST A. HARRIS, C.E.

1. Place upon the accompanying plan the lines which you deem necessary for a chain survey of the ground which it represents.

2. Describe the construction of the Prismatic Compass.

3. In conducting a compass survey, what means would you adopt to check your work?

4. State and illustrate three methods of surveying a field by an angular instrument.

5. In plotting a *traverse* survey describe, (*a*) what you consider the most accurate method, (*b*) a means of checking your work.

6. *Balance* the survey, of which the following are the field-notes, and calculate the area directly from the notes.

Station.	Bearing.	Distance.
1	N. 52° E.	10.60
2	S. 29¾° E.	4.10
3	S. 31¾° W.	7.70
4	N. 61° W.	7.24

7. Describe an approximate method for determining the true meridian without the aid of the transit instrument.

8. What are the several variations to which the magnetic needle is subject?

9. Describe the application of the *permanent* adjustments to the surveyor's transit.

10. Describe a method of conducting a traverse survey with the transit, in which the *needle* should always agree with the *verniers* in its reading.

a) When is this check not practicable?

11. How would you apply the telescope of an instrument to the measurement of distances?

12. Exhibit a method of keeping the field-notes for a line of levels.

MIDDLE YEAR.

(CIVIL AND MECHANICAL ENGINEERING.)

DRAWING.

Saturday, April 7th :—Afternoon, 2 to 5.

Examiners..... { C. H. McLeod, Bac. App. Sc
E. A. Harris, C. E.

Project perspectively :—

1. A cube of 3·5 feet side penetrated by a cylinder, the diameter of the end of which is 2 feet. The axes of the cube and cylinder which coincide, are horizontal the ends of the cylinder project on each side 1 foot beyond the cube. The object is in the foreground 5 feet on the left of the spectator, and so placed that a diameter of the pierced ends of the cube is horizontal and makes an angle of 30° with the picture plane.

2. The frustrum of a right cone, the diameters of the ends of which are respectively 4 feet and 2 feet, and the altitude of which is 4·5 feet. The frustrum stands in the foreground 4 feet on the right, and rests on its smaller end with its axis vertical.

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3. A right pyramid, whose altitude is 8 feet and base a regular hexagon of 2 feet side, stands 4 feet within the picture plane, its axis being vertical. An angle of the base is one foot on the right, and that one of the sides containing it, which is nearest to the spectator, makes an angle of 15° with the picture plane.

4. A *luggage lorry*, in accordance with the accompanying drawings when the two-wheeled end is vertical and at an angle of 60° with the picture plane.

NOTE.—Projections to be made to a scale of $\frac{1}{24}$. Height of the eye to be taken at 6 feet and the distance of the spectator at 12 feet.

MIDDLE YEAR.

CIVIL ENGINEERING.

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiners ..... { E. A. HARRIS, C.E.
C. H. MCLEOD, BAC. APP. SC.

1. Draw diagrams, and show the method of taking out and recording notes of the sites of culverts, and how these are made use of in setting off the structure.

2. Deduce a formula for the length of inclined culverts when crossing the line of railway at right angles.

3. Show that the length of a skew inclined culvert is

$$l = \frac{c}{\tan m \sin m_2 \pm \tan m_1}$$

m being the slope of the embankment, m_1 the angle of inclination of the culvert and m_2 the angle of skew, and c the distance from the roof of the culvert to the intersection of the slopes.

4. What is concrete, and how made? Describe the proper construction of a coffer dam in general.

What is meant by sheet piling? What are caissons, and when are they used?

What is necessary in general to secure a good foundation? How would you make a suitable foundation in spongy clay or soft sand?

5. What is the difference between cement and common mortar? How is cement usually made, and with what proportions of sand is it commonly used on railroad structures? Describe a test for good cement. What is hydraulic mortar?

6. Calculate the volume of earth work in the excavation and embankment of which the accompanying diagram shows the sections.
How would you take sounding in open water?

7. How are stations afloat determined in marine surveying by the problem of the three points?

8. What special precautions are often required to prevent leaking of a coffer dam? How are caissons used, how sunk?

9. What are the precautions to be used in levelling and transiting and what must be specially guarded against as to wind, rain, breakage of cross hairs, and instrument getting out of adjustment?

10. How may brick work be rendered impervious to water? (*a*) Would the tendency to filtration be the same at all portions of a reservoir wall?

MIDDLE YEAR.

SURVEYING.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiners,..... { C. H. McLEOD, BAC. APP. SC.
ERNEST A. HARRIS, C.E.

1. Describe a method of conducting an extensive "Lands" or "Township" Survey.

2. How may the level be used to measure small vertical angles?

(*a*) Calculate a formula for this purpose.

3. In the permanent adjustment of a level what, only, is necessary to insure correct levelling?

(*a*) What inconvenience might arise from attention to this only?

4. In levelling across a deep ravine where it is impossible to secure a long back sight, how would you insure the accuracy of your work?

5. Calculate an approximate expression for the curvature of the earth's surface.

6. In calculating heights by the mercurial barometer, what are the corrections which should be applied to the observed reading?

7. Describe a method of connecting an underground survey with one on the surface, (*a*) when the mine is entered by an adit, (*b*) when it is entered by a shaft.

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8. Describe the construction and adjustment of the sextant.

9. How would you reduce an angle measured by the sextant between two objects not in the same plane to its equivalent horizontal angle?

10. Describe, generally, the method of conducting an extensive Geodetic survey.

11. Explain the principle upon which a base-measuring apparatus—the length of which is not affected by change in temperature—may be constructed.

SENIOR YEAR.

ELEMENTS OF DIFFERENTIAL AND INTEGRAL CALCULUS AND OF ANALYTIC GEOMETRY.

TUESDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiner, ...ALEXANDER JOHNSON, LL.D.

1. Give the two definitions of differential co-efficient.

2. Find $\frac{dy}{dx}$ when $y = \sin x$, and write down the formula that corresponds in the Integral Calculus.

3. Show that if A be the area of any curve

$$\frac{d\,A}{d\,x} = y$$

and apply this to prove by integration that the area of a common parabola is two-thirds of the rectangle under the double ordinate and the abscissa.

4. Find the volume of a sphere by integration.

5. Assuming that the moment of inertia of a cylinder, whose height is h and radius of base r, about its geometrical axis is $\frac{\pi}{2}\frac{w}{g}h\,r^4$, ($w$ being the weight of a cubic foot of the material), show that the moment of inertia of a cone about its geometrical axis is $\frac{1}{10}\frac{w}{g}\pi\,h\,r^4$, the letters having meanings similar to what they had before.

6. Show that the equation of a line passing through two given points $x' y', x'' y''$ is

$$\frac{y - y'}{x - x'} = \frac{y'' - y'}{x'' - x'}$$

7. Prove that the equation of the tangent at any point $x' y'$ to any curve whose equation is $y = f(x)$ is

$$\frac{y - y'}{x - x'} = \left(\frac{dy}{dx}\right)'$$

where the dash over the bracket on the right hand side indicates that the co-ordinates x' and y' are put for x and y inside.

8. Trace the curve

$$\frac{x^2}{9} - \frac{y^2}{4} = 1$$

9. Find the point of intersection of the two lines $x + 7y + 11 = 0$ and $3y - x = 1$.

10. Show that if θ denote the angle between two given lines,

$$y = m x + b$$

and $$y = m' x + b'$$

then $$\tan \theta = \frac{m - m'}{1 + m m'}$$

a. Write down what this condition becomes in the cases where the two lines are at right angles or are parallel.

B.A. APP. SC. AND MIDDLE YEAR EXAMINATION.

RAILWAYS HARBOURS AND SEWERAGE.

SATURDAY, APRIL 14TH:—MORNING, 9 TO 12

Examiners,..... { E. A. HARRIS, C.E.
C. H. MCLEOD, BAC. APP. SC.

1. (*a*) What is the object of "ballasting" a railway track? (*b*) Name some of the requisites of good ballast. (*c*) What is meant by "permanent way?" What is necessary in a good rail joint? Make sketches of any you are acquainted with. Which do you consider the best, and why? (*d*) What is the use of contour lines? of cross sections?

2. Derive the formula for the elevation of the outer rail on a curved track.

$$e = \frac{g v^2}{32.2} R;$$ also give the rule in words.

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3. Define a Prismoid. Let V = volume of Prismoid, l = length, B = section at one end, B′ = section at other end, M = middle section. Derive the Prismoidal formula $V = \frac{l}{6}(B + B' + 4\,M)$.

4. In preparing the specification for the construction of a line of Railway name some of the points in respect to *Clearing*, *Grubbing*, *Grading*, *Excavation*, *Embankment*, and *Masonry* which should be insisted on.

5. (*a*) Describe the process for making up a monthly estimate for earth work executed on a line of railway. (*b*) How would you measure the Freshet discharge of streams? (*c*) State the successive engineering steps necessary to the construction of a line of Railway, from the preliminary survey to the ballasting and centering of Track.

6. (*a*) What rule governs approximately the height of waves on a windward shore? Explain the formula $h = a\sqrt{d}$. State the difference between waves in shallow water and those in deep water. (*b*) What shape of foundation is generally preferable for an exposed sea wall in shoal water? What for one in deep water?

7. (*a*) In what principle does marine masonry differ from that necessary for engineering structures on land? What general rule should govern the construction of each course of a sea wall? (*b* Name seven most important conditions to be effected in the design of the ground plan of harbour works.

8. State the three distinct objects to be gained by any system of sewerage. What local considerations should govern you in deciding on a plan for the sewerage of any given town or city?

9. (*a*) What systems of sewerage are in use at the present day? (*b*) What are the principal features, and what the weak points of each?

10. In harbor work explain the use of the formula

$$x = H\left\{\sqrt{\frac{b}{B}} - \tfrac{1}{6}\left(1 + \sqrt{\frac{b}{B}}\right)\sqrt[4]{D}\right\}$$

SENIOR YEAR.

CANADIAN WOODS.

Examiner,.....J. W. Dawson, LL.D., F.R.S.

1. How may the wood, flowers and fruit of Angiosperms be distinguished from those of Gymnosperms.

2. Characterize the order *Sapindaceæ*, and give a list of the Canadian species.

3. Give a list of the Canadian woods most eminent for beauty of colour and texture, toughness and durability, with their botanical names and distribution.

4. How can different kinds of wood be best distinguished under the microscope? Give examples.

5. State in tabular form the timber trees in the families *Cupuliferae*, *Juglandaceæ* and *Betulaceæ*, with the quality and botanical name of each.

6. Describe the more important species of *Pinus*, *Abies*, *Thuja* in the Atlantic and Pacific regions of the Dominion.

7. Give as complete a list as possible of the orders, others than those above mentioned, which contain timber trees.

8. State what you know of the botanical relations and economic uses of the specimens exhibited.

BAC. APP. SC. EXAMINATION.

PRACTICAL MECHANICS.

SATURDAY, APRIL 7TH:—MORNING, 9 TO 12.

Examiners,..... { ERNEST A. HARRIS, C.E.
C. H. MCLEOD, BA. APP. SC.

1. If three forces be in equilibrium, show that the following relations obtain

$$\left.\begin{aligned} P : Q &= Sin\ QAR : Sin\ RAP \\ Q : R &= Sin\ RAP : Sin\ PAQ \\ R^2 &= P^2 + Q^2 + 2\,PQ\ cos\ PAQ \end{aligned}\right\} \text{Figs. 1, 2.}$$

and state the proposition in words.

2. How may moments be represented by areas? (*a*). Prove by the method shown that the resultant of two parallel forces F and W in the same direction, lies between them and in such a position that $F : W = OB : OY$. Also show how this may be proved by considering the measure of a force to be the intensity of the force, multiplied by the distance through which it may be supposed to act.—Fig. 3.

3. What are the rectangular components of a force? (*a*). What are the three equations that express the resultant of any number of forces F_1 F_2 F_3 F_4, &c., acting in a plane when θ_1 θ_2 θ_3 and θ_4, &c., represent the angle they make with any one of two rectangular axes taken at random in their plane. (*b*). What do these become in the case of parallel forces, and how can this be applied to Bridge calculations.

4. Describe the various methods used for finding the centre of gravity, and refer clearly to the propositions or principles upon which they are based (illustrated by figures.)

5. Define what is meant by the moment of Inertia, and state the relations that exists between the moment of Inertia of a body with respect to an axis passing through its centre of gravity, and one at a given distance from it. (*a*). Also with respect to two rectangular axes in a plane and another at right angles to them at their point of intersection. How could the moment of Inertia of any plane area be found approximately without the aid of these propositions (and merely depending upon the definitions of moment of Inertia? (*b*). Define the radius of Gyration, and express it in symbols.

6. *A.B.C.* is an equilateral triangle. Three equal forces *P.* act respectively from *A.* to *B.*, from *A.* to *C.*, and from *B.* to *C.* Show that the resultant is a force $2P.$ acting parallel to and in the same direction as *A.* to *C.* through the middle point of *B.C.*—Fig 4.

7. *A.B.C.D.* represents the section of a wall 50′ long. The total weight of the wall is assumed at 300,000 lbs. At every foot of its upper inside edge a pressure of 100 lbs., tending to overturn this wall, is exerted. This pressure is at such an inclination that its direction produced is at a perpendicular distance, from *A.*, 10 ft. Required the thickness the wall must have to just prevent its overturning.—Fig. 5.

8. Each side of the triangle *A.B.C.* is 10 ft. long. Three equal forces *P.* act from *A.* to *B.*, from *B.* to *C.*, and from *C.* to *A.* respectively. Show that the three forces are equivalent to a couple whose moment is $5P. \sqrt{3}$.—Fig. 4.

9. A solid body is acted upon by a couple whose moment is $-P. \times A.B.$, also by a single force *Q.* acting at *O.* in the direction indicated. Determine completely the resultant, (when the force and the couple are in the same plane.)—Fig. 6.

10. Required the moment of Inertia of a rectangular parallelopipid whose edges are *A.B.C.* referred to an axis drawn through the centre of gravity and parallel to the edge *C.*, having given that the moment of Inertia of a rectangular lamina of edges *A.* and *B.*, and thickness *K.* referred to an axis passing through the middle point of *B.*, and parallel to *A.* is $\frac{1}{12} G.A.B^3.K.$, and referred to an axis passing through the middle of *A.* and parallel to *B.* is $\frac{1}{12} G.B.A^3.K.$ *G.* represents the density of the material.

BAC. APP. SC. EXAMINATION.

DRAWING.

SATURDAY, APRIL 7TH:—AFTERNOON, 2 TO 5.

Examiners..... { C. H. McLEOD, BAC. APP. SC.
E. A. HARRIS, C.E.

1. Project orthographically:—

A right cylinder resting upon its base, penetrated by a right cone, the axis of which bisects that of the cylinder at right angles and is parallel to the planes of projection. The length of the cylinder is 4·5 inches and the diameter of its base 2 inches. The altitude of the cone is 4 inches and the diameter of its base 3·6 inches.

(*a.*) Show by its development the surface of the cylinder after penetration.

(*b.*) Show the section caused by a plane which is perpendicular to the vertical plane and passes through one end of the axis of the cylinder and the basal end of the axis of the cone.

(*c.*) Find the horizontal and vertical trace of the section plane; supposing the object to have been turned through 30° around the axis of the cylinder.

2. Project isometrically the model before you.

3. Project perspectively a *luggage lorry*, in accordance with the accompanying drawings, when the two-wheeled end is vertical and at an angle of 60° with the picture plane.

BAC. APP. SC. EXAMINATION.

THE THEORY AND CALCULATION OF STRUCTURES.

(GIRDERS, ROOFS AND PILLARS)

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiners,..... { E. A. HARRIS, C.E.
C. H. McLEOD, BAC. APP. SC.

1. In the design of a truss what sort of figures should be formed by the arrangement of its various parts? What is the object of counterbracing? Under what sort of load is it necessary?

2. Make a rough sketch of a Warren Girder, a Howe Truss, a Fink, a Bollman. Explain how you would calculate the stresses in (1) a Warren girder, (2) a Howe Truss when composed of two or more systems. Figs (1), 2).

3. Explain the method of bridge calculations by sections. Indicate and illustrate by sketch a method for calculating the stresses on a Warren bridge.

4. If a beam is subjected to the action of a fixed and of a moving load, show by mathematical investigation under what arrangement of these loads any given section is subjected to the greatest shearing force and when to the greatest bending moment.

5. Demonstrate the formula $\frac{f\,I}{y^1} \equiv M$, and explain its use, showing how it is applied to the calculations of the safe loads and dimensions of beams.

6. Show how the formula P, $x - \Sigma\, w\, x$, which expresses the bending moment of a loaded beam at any point, becomes equal to the rectangle of the two segments of the beam, multiplied by half the intensity of the load, for the case when the beam is loaded with a uniformly distributed load or how

$$M = \frac{w\,(l-x)\,x}{2}$$

7. A Howe Truss bridge, of span 80 feet, is divided into eight panels of 10 ft. each. Distance between chords is 10 ft. $=$ k. Length of the diagonals is 14.14 ft. $=$ s. The whole of both live and dead loads is supposed to rest upon the lower chord.

The fixed weight of the bridge for one girder is 500 lbs. per lineal foot. A train, whose weight for one girder is 1000 lbs. per lineal foot, passes over the bridge from right to left at the rate of 30 miles per hour.

Required the greatest stresses which can occur in the members of the panel counting from the right hand end.

$$\frac{s}{k} = 1.4 = \text{secant of } 45^\circ$$

Show in what panel the counters begin.

8. Prove that the chord stresses in a Howe girder are equal diagonally, and that the chord stresses in a Warren are not equal diagonally. What provision for counterbracing is made in a Warren girder?

9. Explain the use of Gordon's formula:

$$P = \frac{f\,S}{1 + \frac{a\,l^2}{\square}}$$

What units are the different letters to be taken in, and what do they represent?

10. A beam of oak of rectangular cross section is supported at each end and loaded uniformly along its whole length.

Its length is 40 feet, breadth 6 inches, depth 12 inches. What is the total weight which the beam will support?

At what point will it ultimately break? Why?

The modulus of rupture of oak may be taken at 10,000 lbs. per sq. inch, moment of inertia is $\frac{1}{12} bd^3$.

BAC. APP. SC. EXAMINATION.

DESIGNING AND ESTIMATING.

SATURDAY, APRIL 21ST:—MORNING, 9 TO 11

Examiners, ... { E. A. HARRIS, B.E., C. H. MCLEOD, BA. AP. SC.

1. Describe how you would proceed in taking notes for the setting out of the culverts on a line of Railway. Illustrate by diagrams in plan and elevation, describing the whole process from the beginning showing how the same is applied to box and arch culverts on sloping ground, both when the slope is great and small, (either above 5 per 100 or under).

2. Show how a culvert is affected by being placed on a slope, and indicate what plan you would adopt for culverts on a slope of under 5 per 100, and what for slopes greater than 5 per 100, and upon what method the mason would have to work in the former case and in the later.

3. Deduce the formula for the length of a skew inclined culvert.

4. Calculate the length of a 2 × 4 box culvert, from the following data:

Sin of the angle skew (40°) = ·6427.
Tan of angle of inclination of culvert = $\frac{7}{100}$.
Slope of the embankment $1\frac{1}{2}$ to 1.
Height of embankment abovh paving = 40 ft.
Widfh of Rod-bed = 18 ft.

5. What steps would you consider necessary in order to ascertain the advisability of building a structure, such as a culvert or bridge, upon any proposed site. (*a*) What would you do in case of an infirm or unstable foundation. (*b*) What in case of rock.

DESIGNING AND ESTIMATING.

AFTERNOON, 2.30 TO 5.30.

6. Draw to scale the plan, elevation and section of a desigi for a Beam Culvert of 8 ft. span.

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a. Show the arrangement of the superstructure of stringers, ties and rails, in their relation to formation level. Mark the approximate dimensions on each.

The following data is given :—From top of paving to formation level is 4 ft.

From top of paving to level of foundation is 3 ft. Slope of earth $1\frac{1}{2}$ to 1. Bridge seat below formation level is $8\frac{1}{2}$ inches.

7. A Howe truss bridge is supported at each end by hollow cylindrical steel pillars, 40 feet in length. Calculate and design, by Gordon's formula, the dimensions of one of these pillars to sustain a load of 400,000 lbs.

$$P = \frac{f s}{1 + a \frac{l^2}{h^2}} \qquad f = 114000 \qquad a = \frac{1}{1500}$$

a. Make general drawings shewing the details of the bridge, (the joints and connections).

NOTE.—Candidates are only expected to answer one of the above questions. Full marks may be obtained by perfect answering in either.

MINING COURSE.

MIDDLE YEAR.

(Also Honour Students in Geology.)

BLOWPIPE ANALYSIS.

WEDNESDAY, APRIL 25TH :—MORNING, 9 TO 11.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. What are the uses of the following reagents in blowpipe analysis ?—Potassic Cyanide, Calcic Fluoride, Cobaltic Nitrate, Cuprie Oxide, and Magnesium.

2. Describe the coatings produced on charcoal by the Oxides of Antimony, Zinc, Bismuth and Lead.

3. Give ready methods for the detection of Sulphur and Boric Acid in minerals.

4. By what blowpipe tests would you distinguish Graphite from Molybdenite, Millerite from Iron Pyrites, Franklinite from Chromite, and Galena from Argentire?

5. Give the blowpipe characters of any four of the following minerals:

Calcite,	Orthoclase,
Barite,	Sphalerite,
Apatite,	Cassiterite,
Bornite,	Pyrrhotite.

6. Explain the terms decrepitation, intumescence, flaming, oxydising flame, reducing flame.

7. Describe the borax heads produced with the Oxides of Iron, Cobalt Manganese, and Chromium.

8. What compounds are indicated by the following sublimates in closed tubes?—(1) Black, lustreless, red when rubbed. (2) Black, brilliant and giving an odour of garlic when heated.

Determination of Minerals with the blowpipe in the Laboratory.—2 p.m to 5 p.m.

MIDDLE YEAR.

DRAWING.

SATURDAY, APRIL 7TH:—AFTERNOON, 2 TO 5.

Examiners..... { C. H. McLEOD, Bac. App. Sc.
E. A. HARRIS, C.E.

1. Project orthographically a pyramid formed by four equilateral triangles of 3 inches side, when its axis is vertical and one edge of its base makes an angle of 45° with the vertical plane.

(*a*) Show the section caused by a plane passing through one side of the base of the pyramid and bisecting the opposite slant edge.

(*b*) Show by its development that portion of the surface of the pyramid which is above the section plane.

(*c*) Find the vertical and horizontal trace of the section plane.

2. Project isometrically the waggon for mining purposes of which the object before you is a model.

3. Project perspectively:—

(*a*) A cube of 3·5 feet side penetrated by a cylinder, the diameter of the end of which is 2 feet. The axes of the cube and cylinder which coincide, are horizontal, and the ends of the cylinder project on each side one foot beyond the cube. The object is in the foreground 5 feet on the left of the spectator, and so placed that a diameter of the pierced ends of the cube is horizontal and parallel to the picture plane.

(*b*) A *luggage lorry* in accordance with the accompanying drawings, when the two wheeled end is vertical and at an angle of 60° with the picture plane.

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FACULTY OF LAW.

FIRST YEAR.

COMMERCIAL LAW.

Examiner,..... .....PROFESSOR WURTELE, Q.C., B.C.L

OBLIGATIONS.

1. What is a Contract; and what must acceptance cover?

2. What is an aleatory Contract?

3. When is error as to the person a cause of nullity in a Contract?

4. What is the effect of deception practised by a third party without the connivance of the party contracted with?

5. Explain the effect of a Contract entered into by a minor:—1st. For acquiring property or obliging himself personally; 2nd. For the alienation or incumbrance of his immoveable property?

6. What obligations do not pass to the heirs of the debtor?

7. What difference is there in the incapacity of a wife as regulated by our Code and as regulated by the Code Napoléon?

8. What is the effect of a Gift disguised under the form of a Sale?

9. What is the effect of an unlawful consideration in a Contract?

10. When does a Contract of Alienation have effect as regards third parties?

FIRST YEAR.

CIVIL PROCEDURE.

Examiners,..... { PROFESSOR DOUTRE. / LECTURER HUTCHINSON.

1. Can a married woman plead in her own name? Can a minor? How is each represented, assisted or authorized?

2. In suing a public officer for damages by reason of any act done by him in the exercise of his functions what formality must be observed?

3. What exception is there to the rule that delays run upon Sundays and holidays?

4. In what cases is it sufficient to give only the initials of the Christian or first names of the Defendant in a writ of summons?

5. When a Corporate body is a party to a suit, how is it decribed in the writ of summons?

6. Within what delay must a Defendant summoned, appear? What is the effect of non-appearance?

7. How many kinds of preliminary pleas are there? Define each.

8. Within what delay must such pleas be fyled? In what case would this delay not run?

9. Before whom can application for security of costs be made?

10. What is an affirmative plea? Give an example.

11. What is the object of an Incidental demand and by whom can it be made?

12. What is the object of an Intervention? By whom can it be made? and within what delay?

FIRST YEAR.

CIVIL LAW.

Examiners,..... .... { PROF. RAINVILLE. / LECT. ROBIDOUX.

1. Comment la qualité de sujet britannique s'acquiert-elle ?

2. Quels sont les sujets britanniques par droit de naissance ?

3. Quels sont les droits que la naturalisation confère dans la Province de Québec à la personne qui l'obtient?

4. L'étranger peut-il être poursuivi en Bas-Canada, et pour quelles causes?

5. Qu'est-ce que la mort civile?

6. Quelles sont les peines afflictives qui entraînent la mort civile?

7. Comment s'opère le changement de domicile?

8. Quel est le domicile du mineur non-émancipé?

9. Qu'entend-on par absent?

10. Quand peut-on se faire envoyer en possession provisoire des biens d'une personne?

11. Quelles sont les principales obligations de ceux qui ont obtenu la possession provisoire?

12. A quelle condition peut-on réclamer un droit échu à un absent?

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FIRST YEAR.

LEGAL HISTORY.

Examiner,..... .....M. LAREAU.

1. Quelles sont les sources du droit canadien ?

2. Nommez les grandes ordonnances du droit français antérieures à l'établissement du Conseil Supérieur de Québec ; dites la date de leur publication ?

3. A quelle date remonte l'établissement du Conseil Supérieur de Québec, et comment était-il composé ?

4. Veuillez décrire le système judiciaire en vigueur sous la domination française ?

5. Nommez les principales chartes qui ont régi le Canada sous la domination française ?

6. Nommez les principales lois qui ont été promulguées par le Conseil Supérieur de Québec ?

7. Quelles sont les principales dispositions contenues dans l'acte de Québec ?

8. Quelles sont les principales dispositions contenues dans l'acte constitutionnel de 1791, et dans l'acte d'union de 1840 ?

9. Quelles sont les principales mesures adoptées par l'assemblée législative, de 1791 à 1840 ?

10. Quelles sont les principales mesures adoptées par le Parlement-uni de 1840 à 1867 ?

SECOND YEAR.

CONSTITUTIONAL LAW.

Examiner,..... .....MR. ARCHIBALD.

1. What are the principal prerogatives of the Sovereign under responsible or parliamentary government ?

2. What are the principal distinctions between parliamentary and prerogative government ?

3. When was the principle of choosing the members of the Cabinet Council from among the members of the two Houses of Parliament adopted, and what evil was it intended to remedy ?

4. What are the great departments of governmental institutions, and what is their relation to each other ?

5. What are the powers of our Federal and Local Governments respectively with regard to the constitution of the courts and the administration of justice?

6. Has the Governor General in Council in the Federal Parliament any veto over acts of the Local Legislatures, and, if so, when and how must that power be exercised?

7. What are the provisions of the Act of British North America with regard to education?

8. Of how many members is the Federal House of Commons now composed? How many members constitute the Senate, and is there any provision for increasing their number?

9. What are the principal limitations upon the power of either Federal or Local Legislature, to make laws, arising from the Act of Confederation?

SECOND AND THIRD YEARS.

COMMERCIAL LAW.

Examiner, ... PROFESSOR WURTELE, Q.C., B.C.L.

BILLS OF EXCHANGE.

1. What is the order or promise in a Bill of Exchange or Promissory Note?

2. What effect would fraud practised by the payee upon the maker have with respect to a *bonâ fide* holder of a Promissory Note when acquired by him :—1st. Before maturity; 2nd. After maturity?

3. What is the obligation and what are the rights of an accommodation maker?

4. How can the negotiability of a Bill of Exchange or Promissory Note be stopped?

5. How can a holder avoid liability in endorsing and transferring a Bill of Exchange or Promissory Note?

6. What is the effect of a stipulation in renewing a Promissory Note that the original note is to be retained?

7. What recourse is there for a lost Bill of Exchange or Promissory Note?

8. What must the payment of a protested Bill of Exchange include?

9. What recourse has the holder of a Cheque of which payment has been refused?

10. What is the responsibility of a person paying with Bank Notes?

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SECOND AND THIRD YEARS.

CIVIL PROCEDURE.

Examiners,..... { PROFESSOR DOUTRE.
{ LECTURER HUTCHINSON.

1. Can a physician as a witness be compelled to declare what has been revealed to him confidentially in his professional capacity?

2. What is the effect of a party to a suit refusing to answer interrogatories upon articulated facts?

3. What is the object of a Commission Rogatoire; when should it be applied for, and how are the commissioners appointed?

4. How can the taxation of a witness be enforced, and against whom?

5. How can a party avail himself of a Report of Experts? how of an Award of Arbitrators?

6. What cases are susceptible of trial by jury, and when must the motion for jury trial be made?

7. How many names of jurors are submitted for trial of each cause? how many are summoned? how many are chosen? how many are sufficient to carry a verdict?

8. Before what court must a motion for a new trial be made, and within what delay after the verdict?

9. What cases are susceptible of review before three judges? what cases are susceptible of appeal from the Court of Review?

10. When can a judgment be revoked?

11. What Bank bills and what coin are legal tender in this province?

12. Who can make an affidavit for a writ of capias? What court has jurisdiction in matters of capias, and what amount must be claimed in such cases?

SECOND AND THIRD YEARS.

Examiners,..... { PROF. RAINVILLE.
{ LECT. ROBIDOUX.

1. Quelles conventions des futurs époux peuvent-ils faire dans un contrat de mariage?

2. Un immeuble acquis par l'un des époux entre la date du contrat de mariage et celle de sa célébration, tombe-il dans la communauté?

3. Les immeubles donnés aux deux époux, conjointement, par l'ascendant de l'un deux, tombent-ils dans la communauté ?

4. De quoi se compose passivement la communauté ?

5. Quand la communauté est elle tenue des dettes contractées par la femme avant son mariage ?

6. Quelles sont les obligations de la communauté relativement aux dettes passives d'une succession purement immobilière échue au mari ?

7. Quelles sont les obligations de la communauté relativement aux dettes passives d'une succession purement immobilière acceptée par la femme, autorisée en justice, sur refus du mari ?

8. Lorsque la succession échue à l'un des époux est en partie mobilière et en partie immobilière, comment la communauté est-elle tenue des dettes dont est grevée cette succession ?

9. Sur quels biens les créanciers peuvent-ils poursuivre le paiement des dettes contractées par la femme commune, du consentement de son mari ?

10. Sur quels biens se poursuivent les condamnations pécuniaires encourues par le mari pour crime ou délit? Quand s'exécutent celles encourues contre la femme ?

11. Quel est l'effet d'une condamnation contre l'un des époux pour crime emportant mort civile, relativement aux biens de la communauté ?

12. Quelles sont les obligations de la femme relativement aux baux de neuf ans que le mari a renouvelés des biens de sa femme plus d'un an avant l'expiration du bail courant ?

SECOND AND THIRD YEARS.

CIVIL LAW.

Examiner, ... M. LAREAU.

1o. Qu'est-ce que le Privilège ; qu'est-ce que l'hypothèque ; dites la différence qu'il y a entre l'un et l'autre ?

2o. Dans quel ordre s'établissent les privilèges sur les biens meubles ?

3o. Dans quel ordre s'établissent les privilèges sur les biens immeubles ?

4o. Combien distinguez-vous de sortes d'hypothèques et donnez la définition de chacune d'elle ?

5o. Quelles sont les exceptions que le tiers-détenteur peut opposer à l'action hypothécaire, et veuillez définir et caractériser chacune de ces exceptions ?

6o. Comment s'éteignent les privilèges et les hypothèque?

7o. Qu'est-ce que la prescription; combien de sortes, et définissez chacune d'elle?

8o. Dans quels cas il y a-t-il lieu à intervertion de titre?

9o. Nommez quelques courtes prescriptions?

10. Quelles sont les personnes contraignables par corps?

SECOND AND THIRD YEARS.

INTERNATIONAL LAW, INSURANCE AND BOTTOMRY.

Examiner,.....PROFESSOR KERR,

1. What is International Law? What does it determine? What are its sources?

2. What is War? What effect does the existence of a war between two States produce upon the rights and obligations of the subjects of those States?

3. What is the right of Blockade? How is a Blockade constituted? How is it brought to an end? What are the consequences of a breach of Blockades

4. What is Contraband of War? To what consequences does the carrying of Contraband of War expose the owners of such Contraband and the owners of the vessels carrying it?

5. What is Insurance? How many different kinds of Insurance can be effected? Describe the nature of a policy of Marine Insurance.

6. What constitutes an Insurable interest in Marine Insurance? What in Fire Insurance? What in Life Insurance?

7. What is the difference between an absolute total loss and a constructive total loss in order to recover the total sum insured; in a case of constructive total loss what proceedings are necessary?

8. Describe what constitutes a Warranty. How many kinds of Warranties are there? What is the effect of breach of Warranty in Insurance? What is the effect of a false representation?

9. What is a treaty between States? What rules governthe interpretation of treaties? How can a treaty be set aside or abrogated?

10. What law regulates the rights of married persons changing their domiciles after marriage, to a State wherein the law on the subject of marriage and the rights of the contracting parties is different to the law of the

tate wherein the marriage was solemnized, as to present and future property, real and personal, of the conjoints, what effect does such change produce?

11. What is a general average loss? What circumstances give use to contribution? By what principles is such contribution regulated?

12. What is extra territoriality? Who are entitled to its privileges and what are those privileges?

N. B.—1st to 8th questions for Degrees; the whole paper for Honours.

THIRD YEAR.

CRIMINAL LAW.

Examiner,.....MR. ARCHIBALD.

1. What is Criminal Law? Into what great branches is it divided?

2. At what place must a criminal offence be tried? and mention the cases in which it may be tried in more than one place.

3. In what cases may an arrest be made without a warrant by a peace-officer, or by a private person?

4. What is the effect of drunkenness as regards responsibility for a criminal offence?

5. What is the distinction between larceny and obtaining goods under false pretences? In what does embezzlement differ from larceny?

6. What are the different species of justifiable homicide?

7. Explain the law in relation to the effect of provocation upon the degree of guilt, attaching to a homicide.

8. What is counterfeiting, and to what extent must counterfeit money resemble the current coin?

9. What is conspiracy? Where may the venue be laid in a trial for this offence?

10. How many peremptory challenges are allowed to the prisoner and the crown respectively in trials for the different classes of offences?

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(ADDITIONAL MEDAL QUESTIONS.)

11. What is a challenge to the array; when must it be made? How is it decided? and what course should be followed if it should be sustained?

12. If in a criminal trial the panel should be exhausted without obtaining a complete jury what course should be followed?

13. Are there any offences for which an indictment cannot be laid DE PLANO before a grand jury, and, if so, what are they, and what preliminary formalities must be observed with regard to them?

EXAMINATION FOR DEGREE OF D.C.L.

CONSTITUTIONAL LAW.

Examiner,.....MR. ARCHIBALD.

1. Mention the limitations of the Royal prerogative resulting from the coronation oath taken by British Sovereigns since the Revolution, and point out the principal events or statutes which have developed or modified the principles upon which such limitations rest.

2. What is the constitution and origin of the House of Lords, and give shortly the history and present extent of its authority as a Court of Justice?

3. What do you understand by the words "Freedom of the Press," and give a short historical sketch of its development?

4. Describe the form of government under which we live, and point out the principal characteristics which distinguish it from that obtaining in the United States?

5. Are there any matters upon which the Federal and Local Legislatures have concurrent jurisdiction; if so, what?

FACULTY OF MEDICINE.

M.D., C.M., PRIMARY EXAMINATION.

ELEMENTARY BOTANY.

SATURDAY, DECEMBER 9TH :—MORNING, 9 TO 12.

Examiner, ...J. W. DAWSON, LL.D., F.R.S.

1. Explain the terms Protoplasm and Nucleus, and the relation of these to the structures of the vegetable cell.

2. Describe the various kinds of ordinary Vascular Tissue, with their mode of formation and uses.

3. State the composition, mode of occurrence, and uses of Chlorophyll, as found in the cells of the leaf; and explain the action of the Parenchyma containing Chlorophyll.

4. Describe the appearance under the microscope of Scalariform Vessels, Medullary Rays, Vascular bundles of Exogens and Stomata of Leaves.

5. Describe the structures in the wood of an Exogen.

6. What are Vascular, as distinguished from Cellular, plants?

7. Explain the normal structure and functions of the root, and state how Rhizomata and Corms are distinguished from roots.

8. Explain fully the following terms :—Tristichous, Parasitic, Acrogenous, Prosenchyma, Internode.

9. State how leaves are classified with reference to their nervation, general form and modifications of margin.

10. State the sources of the carbon of plants, and the principal chemical change involved in the production of Ternary organic compounds.

11. What are the principal inorganic substances found in plants, and their uses to the plant.

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BOTANY.

Examiner,.....J. W. Dawson, LL.D., F.R.S., &c.

1. Explain the uses of any of the inorganic materials found in the ashes of plants.

2. What ingredients are specially needed in fertile soils, and what are the general relations of plants to soils?

3. Name the circles of organs in a perfect flower, and describe fully the structures of the Anther and Pollen.

4. Describe the Ovary and its contained ovules, and state the changes which the latter undergo in fertilization and ripening.

5. Describe minutely the Stamen, with the terms applied to its parts and position.

6. Describe the organs of fructification in Mosses and Ferns.

7. In what do Albuminous and Exalbuminous seeds differ?

8. Explain the terms Raceme, Testa, Samara, Umbel.

9. State the division of the Phænogamous Series into Classes, and give the characters of the classes.

10. State the distinctive characters of the Gymnosperms, Acrogens and Thallophytes, with examples.

11. In what natural families of plants do we find Samaras, Tetradynamous Stamens, and Ray and Disk Florets.

12. State the place in the natural system of any genus containing Canadian trees, and enumerate the principal species.

13. Describe the specimens exhibited, in relation to the forms of their leaves, and their inflorescence; and refer two of them to their series, classes, and orders.

MATERIA MEDICA.

Monday, March 19th:—Morning, 10 to 12.

Examiner,.....Professor Wright, M.D.

1. Give some observations on the class of Expectorant Medicines, and the doses of the preparations in which they are usually prrscribed?

2. What is the mode of making Nitre,—what are its actions and uses?

3. What remedy is got from the Exogonium Purga? Give a short account of its varieties and constituents.

4. Distinguish between Calomel and Calamine, between Castoreum and Castor Oil; between Copper and Copperas; Berberine and Beberine?

5. How do the chief ingredients in Chincona differ as to their character and action?

6. What are the effects of poisonous doses of Belladonna on special portion of the nervous system? And state the kind of pains, spasms, inflammations, and fevers to which it is best adapted.

CHEMISTRY.

MONDAY, MARCH 19TH:—AFTERNOON, 3 TO 5.

Examiner, ...PROFESSOR CRAIK, M.D.

1. Explain the production of convection currents by heat in liquids and gases, and show the connection of their currents with the Gulf stream, the trade-winds, and land and sea breezes.

2. Point out the differences between a mere mechanical mixture and a true chemical compound, and give an example of each.

3. Describe the general characters of Acids, Alkalies and Salts, and give a formula for one of each.

4. How does Bromine exist in nature? Give an outline of the process by which it is obtained, and describe its properties.

5. How does iron exist in nature? Describe briefly the process of extracting it from its ores, and the tests by which the ferreous and ferric salts may be recognized.

6. Describe the differences between organic compounds and organized substances, and give the formula of the saturated hydrocarbon.

INSTITUTES OF MEDICINE.

TUESDAY, MARCH 12TH:—MORNING, 10 TO 12.

Examiners,.....PROFESSORS DRAKE & OSLER.

1. Describe the properties of Albumen, giving tests. How does Albuminose differ from it?

2. Give a brief description of Ciliated Epithelium. Where is it found?

3. Describe what is seen in a slide of human Blood, examined without addition of any reagent.

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4. State the condition of the chambers and valves of the heart during the second sound.

5. Explain the "necessity of breathing," (besoin de respirer).

6. What is the cause of the acidity of the Gastric Juice? Why are not the walls of the stomach digested by it?

7. How, and by what secretions, is Starch digested?

8. Explain the vascular mechanism of the Kidney.

9. Describe briefly the course of the motor and sensory tracts in the Cerebro-Spinal Axis.

10. Explain the functions of the Laryngeal branches of the Pneumo-gastric.

11. Trace the course of the sound waves until they reach the organ of Corti.

12. Explain the formation of the Allantois.

ANATOMY.

TUESDAY, MARCH 20TH:—AFTERNOON, 3 TO 5.

Examiner, ...PROFESSOR SCOTT, M.D.

1. Describe the surfaces of the base of the skull, and state what passes through the foramina.

2. Describe the two first layers of the muscles of the back; give their origin, insertion, relations and actions.

3. Give the relations, branches and inosculations of the cælic axis.

4. What nerves form the cervical plexus? What are its relations and branches?

5. Give the situation, relations and branches of the otic ganglian.

6. What are the tunics of the globe of the eye, and what arteries are distributed to it?

M.D.C.M. FINAL EXAMINATION.

OBSTETRICS.

WEDNESDAY, MARCH 21ST:—MORNING, 10 TO 12.

Examiner,.....PROFESSOR D. C. MACCALLUM, M.D.

1. Describe the virgin or milliparous uterus, and mention the changes that take place in the structure of that organ as the result of impregnation.

2. What Anæsthetics are employed in Midwifery? Describe their effects and mode of administration; the dangers to which they may give rise, and the best means to obviate these dangers.

3. How would you distinguish a head that is simply *arrested* from one that is *impacted* in the Pelvic cavity, and what consequences are certain to follow in either case if labor be not terminated?

4. Describe separately the disorders of the Nervous system due to the pregnant condition, and give the treatment to be adopted in each.

5. Describe the duties of the Accoucheur in the second and third stages of natural labor.

6. Describe fully the operation necessary to deliver the patient in different degrees of narrowing of the conjugate diameter of the brim of the pelvis below three inches.

THEORY AND PRACTICE OF MEDICINE.

WEDNESDAY, MARCH 21ST:—AFTERNOON, 3 TO 5.

Examiner, ...PROFESSOR R. P. HOWARD, M.D.

1. State the characters of "Zymotici," and name the diseases belonging to that class.

2. Describe the more important measures for treating Hyperpyrexia, and state the doses of the remedies employed.

3. Mention the most frequent causes of death in Rickets, and the signs of the "incomplete or masked" form of that disease.

4. Draw up the diagnosis between Catarrhal Croup and Laryngismus Stridulus.

5. Define Spasmodic Asthma; mention other diseases of the same class, and sketch the treatment of a paroxysm of Asthma.

6. Describe the morbid anatomy of Pleuritis.

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7. What are the signs, symptoms and consequences of Mitral Constriction?

8. Relate the characters of the urine in acute Tubular Nephritis, and the treatment of that affection.

9. Sketch the features of Infantile Spinal Paralysis.

10. State the diagnosis between Ascites and Ovarian Cystic disease.

11. Sketch the treatment of Rickets and of Croupous Pneumonia.

12. From what evidence may the existence of "non-obstructive Ictrus" be inferred?

MEDICAL JURISPRUDENCE.

THURSDAY, 22ND MARCH.—MORNING, 10 TO 12.

Examiner, ... PROFESSOR WILLIAM GARDNER, M.D.

1. Give the diagnosis and prognosis of Melancholia cum Stupore and Acute Dementia.

2. What are the various possible sources of fracture of the cranium in the new-born child, and what characters of such an injury would lead to a suspicion of homicide?

3. Enumerate the signs of death, and describe those on which you would rely the most.

4. What are the tests for blood in solution? To what extent, and by what means, can we diagnose the blood of man from that of the lower animals?

5. What diseases may be confounded with irritant poisoning, and what considerations would lead to a diagnosis?

6. Give the symptoms and post-mortem appearances of poisoning by Corrosive Sublimate.

PRINCIPLES AND PRACTICE OF SURGERY.

THURSDAY, 22ND MARCH:—AFTERNOON, 3 TO 5.

Examiner,.....PROFESSOR G. E. FENWICK, M.D.

1. What are the symptoms and appearances in dislocation of the radius?

2. Describe dislocation of the humerus into the axilla. With what other accident might it be confounded.

3. Mention the several varieties of dislocation of the shoulder, and what lesions would you expect to find in each?

4. What are the objections to attempting the reduction of old dislocations?

5. What is likely to occur in fracture of the patella; how is that accident usually produced?

6. Mention the symptoms of aneurism. How would you treat aneurism of the femoral artery, the result of a wound of that vessel?

7. Mention the coverings of oblique and direct inguinal hernia. What is the relation of the epigastric artery to the neck of the sac in each variety.

8. What complications are likely to arise in scalp wounds; how would you treat them?

9. Describe the different methods of healing in open wounds, and in those which are subcutaneous.

10. Is muscular tissue ever reproduced when destroyed by accident? Mention the method of repair in muscular tissue.

11. Do nerves unite when divided, or are torn across? What would you expect to result as following injury to the nerves supplying a limb?

12. What are the causes of gangrene?

CLINICAL MEDICINE AND CLINICAL SURGERY.

Examiners, ... { Professors George Ross, A.M., M.D.
T. G. Roddick, M.D.

The Examinations in Clinical Medicine and Clinical Surgery were conducted in the wards of the Montreal General Hospital. The time was, owing to the nature of the examination, not exactly limited, but occupied with each candidate from 30 to 40 minutes, only four or five being taken up on each day. This consisted in placing before the student one or more cases of actual disease, not previously seen by him, and requiring him to conduct the enquiry into and examination of such patient in the presence of the examiner: then to give his diagnosis, description of physical signs met with, treatment suggested, &c.; followed by questions suggested upon allied subjects. (In Medicine.) Or to examine and give opinion of injuries, fractures, surgical diseases, &c., and to describe the management which appeared to him suitable in each instance. Exercises were also given in surface-marking of important vessels and parts, and the lines of incisions for operations. (In surgery.)

Amongst the medical cases submitted were the following:—Emphysema, Phthisis, Pneumonia, Pleurisy, Hydro-pneumothorax, Hydrothorax, Valvular Diseases, Thoracic Aneurism, Typhoid and Intermittent Fevers, Bright's Disease, Rheumatism, Pyæmia, &c., &c.

Amongst the Surgical cases were the following:—Erysipelas, Cellulitis, Acute Necrosis, Caries of various bones, Syphilis, Collis' Fracture, Ununited Fracture, Hip-Joint Disease, Synovitis, Hydrocele, Tubercular Testicle, Fistula in Ano, &c., &c.

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PRACTICAL CHEMISTRY.

SATURDAY, DECEMBER 16TH.

Examiner, ...PROFESSOR G. P. GIRDWOOD, M.D.

1. Describe the method of examination of an unknown substance so as to determine the base and acid present.

2. Carry out the answer to No. 1 in determining the substances (a) (b) (c) and (d), and detail the various steps taken in each case, specifying the means of identification.

3. Describe the process of taking specific gravity, giving examples in figures.

EXAMINATION FOR SCHOOL CERTIFICATE AND ASSOCIATE IN ARTS.

PRELIMINARY SUBJECTS.

GEOGRAPHY.

MONDAY, MAY 21ST :— AFTERNOON, 2 TO 4.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L. / REV. ROBERT LAING, M.A.

1. Name, in the upward order, the counties in Great Britain touched by the following rivers,—The Thames, the Severn, the Trent, the Tyne, the Clyde and the Tweed.

2. Mention the principal islands in the Mediterranean.

3. Name the principal rivers that run into the Black Sea and the Caspian Sea and the Persian Gulf.

4. Describe the position of Armenia, and mention the chief cities or towns therein.

5. Mention the principal lakes in Switzerland and Italy.

6. Describe the position of the following straits,— Menai, Bonifacio Gibraltar, Otranto, Messina, Dardanelles.

7. Mention in the order from North to South the States bordering on the Atlantic—i.e. States of the United States.

8. Describe the boundaries of Nova Scotia and New Brunswick.

9. Describe the boundaries of Upper Canada and Lower Canada.

10. Mention the chief cities and towns in Upper and Lower Canada, in New Brunswick and Nova Scotia, and denote the particular counties in which they are.

11. Describe the position of the Province of Manitoba, and mention the lakes on which it borders and its rivers.

12. Where are Prince Edward Island and the island of Newfoundland situated? Mention the chief industries of each, and their form of Government.

GOSPELS.

MONDAY, MAY 21ST:—AFTERNOON, 4 TO 5.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L.
REV. ROBERT LAING, M.A.

1. Give the boundaries of Palestine. Name the provinces into which it was divided in the time of our Lord, and three of the principal places in each province.

2. Describe the mission and character of John the Baptist.

3. Sketch briefly the circumstances of the baptism of Jesus.

4. Name any six of Christ's miracles, and the places in which they were severally performed.

5. Tell what you know of the Pharisees, the Sadducees, and the Herodians.

6. Give an account of any two of our Lord's appearances after His resurrection from the dead.

GEOGRAPHY, PHYSICAL, POLITICAL AND COMMERCIAL.

WEDNESDAY, MAY 30TH:—MORNING, 9 TO 12.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L
REV. ROBERT LAING, M.A.

1. What is the shape of the Earth, and how is its shape ascertained?

2. Give its polar and equatorial dimensions.

3. Describe the motions of the Earth.

4. Mention the substances that enter into the composition of the atmosphere.

5. How is the difference of the degrees of heat in Summer and Winter accounted for?

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6. (*a*) How is soil made? (*b*) How are Deltas formed, and why are they so called?

7. Give some account of the formation of Glaciers:—and mention the principal Volcanoes in Europe.

8. Mention the physical or permanent characters of a country that need to be studied, in the study of its geography.

9. What peculiarity has Nova Scotia in regard to sea coast? What are its chief mineral products?

10. When was the Turkish Empire founded? Of what religions are its inhabitants? What is the form of its government? Which are its three great territorial divisions?

11. Describe the boundaries of Russia and the general character of its surface. Mention its principal rivers, the established form of religion and the government of the country.

12. Describe the position of Persia. Mention its chief towns, products and manufactures.

ENGLISH GRAMMAR (MORELL'S).

TUESDAY, MAY 22ND:—MORNING, 9 TO 12.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L
REV. ROBERT LAING, M.A.

1. Which are the personal pronouns in their simple form and the corresponding possessives?

2. State the definition of relative pronouns as given, and mention what is said of the words "what" and "as."

3. Explain the distinct significations of "who," "which" and "what" when they are used interrogatively.

4. State the definition of the verb as given, and explain the kinds, Transitive, Intransitive, Impersonal and Auxiliary.

5. Mention the parts of speech that the adverb qualifies, with examples, and give the different classes into which the adverb is divided.

6. State the general rule for the formation of the plural, and give the exceptions, exclusive of foreign plurals.

7. Give the possessive and objective cases of the personal pronouns.

8. Give examples of the tenses,—present indefinite, progressive and complete, past indefinite, progressive and complete, future indefinite, progressive and complete.

9. Which are the two principal and the two subordinate elements of the sentence? To which parts of speech do they respectively correspond?

10. Mention the different modes of constituting phrases.

11. Explain what is meant by the direct object and the indirect object of the predicate, the adverbial sentence, the adjective sentence and the noun sentence.

12. What parts of speech take the infinitive mood after them?

13. What kinds of verb reject "to" before the infinitive?

14. State the rules for punctuation.

ENGLISH LANGUAGE (EARL'S PHILOLOGY).

TUESDAY, MAY 22ND:—AFTERNOON, 2 TO 5.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L.
REV. ROBERT LAING, M.A.

1. What is said to be the law by which the relation of the English language to the Indo-European family is established?

2. Give the substance of the remarks on the use of the term Saxon as a distinction for the early period of English history, language and literature

3. Mention what is said of the literature of the Anglian kingdom of Northumberland.

4. How did it happen that in the books preserved between 1100 and 1350 there is no uniformity of dialect?

5. Give the dates of the parts into which the transition period of the language is divided and the dates that comprehend the first national English.

6. How is it accounted for that in the 14th century there suddenly appeared a standard English?

7. Give some instances of the dualism of our elder phraseology.

8. What is it that is said to distinguish all the dialects from King's English? And mention the given illustration thereof.

9. Explain and distinguish the classes of words denominated presentive and symbolical. Mention some of the illustrations.

10. Give examples of adverbs denominated "flat" and "flexional."

11. How does it happen that the verb has greater tenacity of form than the other parts of speech?

12. Show how the English verbs are distinguished from those of the cognate languages.

13. How are strong verbs, mixed and weak distinguished ?

14. Give the substance of the remarks on the plural inflections, s and en, of substantives.

ENGLISH AND CANADIAN HISTORY.

WEDNESDAY, MAY 23RD:—AFTERNOON 2 TO 5.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L.
REV. ROBERT LAING, M.A.

1. Name the Seven Kingdoms, called the Saxon Heptarchy, and state when and by whom they were severally founded.

2. Describe the Sotial condition of the Normans.

3. Trace the descent of Edward III from William the Conqueror, and give the leading events of his reign.

4. Give the leading events of the reign of Henry VII or James I.

5. Name the leading authors of the Stuart period, and the works of any two of them.

6. Who were the founders of the several lines of Sovereigns since the Norman conquest, and when did they begin to reign ?

7. Give a short account of the voyages and discoveries of Jacques Cartier.

8. Write down what you know of any one of the following persons, Champlain, Frontenac, Laval, Talon, Montcalm, Levis.

9. What were the causes which first led to war between the French and English in Canada ?

10. Give the leading events of the war of 1812-1814.

ARITHMETIC.

WEDNESDAY, MAY 23rd :—MORNING, 9 TO 12.

Examiners,..... { REV. J. A. LOBLEY, M.A.
ARCHIBALD DUFF, M.A.

1. Subtract eighty-four times forty-three millions, six hundred and two thousand and fifty-two from forty-nine hundred and eighty-one millions, twenty-five thousand, five hundred and ninety-one. Prove the result and explain why your proof shows your remainder to be correct.

2. Write the Tables used for measuring Length, Land, Liquid, Weight of Precious Metals.

3. The moon revolves in her orbit in 2360591 seconds. Reduce this time to days, hours, &c.

4. A year contains 365 days, 5 hours, 48 minutes, 51 seconds. Find how many days, hours, &c., there are in 17 years. Reduce this answer to seconds.

5. Divide £179.6s.11$\frac{3}{4}$d equally among 97 persons.

6. Write the Rule for finding the G. C. M. of two numbers. Find the G. C. M. of 2254 and 71001, and show what the G. C. M. of these two numbers means.

7. Reduce to its simplest form the following fraction :

$$\frac{\frac{7}{8} \text{ of } \frac{10}{33} + \frac{15}{16} \text{ of } 1\frac{1}{20}}{\frac{15}{16} \text{ of } 2\frac{2}{9} + \frac{2}{3} \text{ of } 3\frac{21}{22}}$$

8. How many furlongs, poles, yards, feet and inches are there in ·073465 of a league?

9. Divide ·00175644 by ·00252.

10. In what time will the interest on $7585 amount to $6371.40 at 7 per cent per annum, simple interest?

11. Find the true present value of a note for $1252.50 payable at the end of 7 months, interest at 7$\frac{1}{2}$ per cent per annum.

12. A trench was to be dug 14 ft. broad by 8 deep, and 1140 ft. long. In 3$\frac{1}{8}$ days 300 ft. of it have been dug by 150 men. In what time will the work be completed if 60 more men be employed and for the remaining 840 ft. the breadth be diminished by 2 ft. and the depth by 1 ft.?

OPTIONAL SUBJECTS.

GREEK.

TUESDAY, MAY 29TH:—MORNING, 9 TO 12.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate, Xenophon, Anabasis, Book I.:—

(A) Ἐπεὶ δ' ἐδόκει ἤδη πορεύεσθαι αὐτῷ ἄνω, τὴν μὲν πρόφασιν ἐποιεῖτο ὡς Πισίδας βουλόμενος ἐκβαλεῖν παντάπασιν ἐκ τῆς χώρας· καὶ ἀθροίζει ὡς ἐπὶ τούτους τό τε βαρβαρικὸν καὶ τὸ Ἑλληνικὸν ἐνταῦθα στράτευμα· καὶ παρ-

ἀγγέλει τῷ τε Κλεάρχῳ λαβόντι ἥκειν ὅσον ἦν αὐτῷ στράτευμα, καὶ τῷ Ἀριστίππῳ συναλλαγέντι πρὸς τοὺς οἴκοι ἀποπέμψαι πρὸς ἑαυτὸν ὃ εἶχε στράτευμα, καὶ Ξενίᾳ τῷ Ἀρκάδι, ὃς αὐτῷ προεστήκει τοῦ ἐν ταις πόλεσι ξενικοῦ, ἥκειν παραγγέλλει λαβόντα τοὺς ἄνδρας, πλὴν ὁπόσοι ἱκανοὶ ἦσαν τὰς ἀκροπόλεις φυλάττειν. Ἐκάλεσε δὲ καὶ τοὺς Μίλητον πολιορκοῦντα, καὶ τοὺς φυγάδας ἐκέλευσε τὴν αὐτῷ στρατεύεσθαι, ὑποσχόμενος αὐτοῖς, εἰ καλῶς καταπράξειεν ἐφ' ἃ ἐστρατεύετο, μὴ πρόσθεν παύσασθαι πρὶν αὐτοὺς καταγάγοι οἴκαδε.

(B) Καὶ ἐν τούτῳ τῷ καιρῷ τὸ μὲν βαρβαρικὸν στράτευμα ὁμαλῶς προῄει τὸ δὲ Ἑλληνικὸν ἔτι ἐν τῇ αὐτῇ μένον συνετάττετο ἐκ τῶν ἔτι προσιόντων. καὶ ὁ Κῦρος παρελαύνων οὐ πάνυ πρὸς αὐτῷ τῷ στρατεύματι κατεθεᾶτο ἑκατέρωσε ἀποβλέπων εἴς τε τοὺς πολεμίους καὶ τοὺς φίλους. Ἰδὼν δὲ αὐτὸν ἀπὸ τοῦ Ἑλληνικοῦ Ξενοφῶν Ἀθηναῖος, ὑπελάσας ὡς συναντῆσαι ἦρετο, εἴ τι παραγγέλλοι· ὁ δ' ἐπιστήσας εἶπε καὶ λέγειν ἐκέλευε πᾶσιν ὅτι καὶ τὰ ἱερὰ καλὰ καὶ τὰ σφάγια καλά. Ταῦτα δὲ λέγων, θορύβου ἤκουσε διὰ τῶν τάξεων ἰόντος, καὶ ἤρετο τίς ὁ θόρυβος εἴη· ὁ δὲ Κλέαρχος εἶπεν ὅτι τὸ σύνθημα παρέρχεται δεύτερον ἤδη· καὶ ὃς ἐθαύμασε, τίς παραγγέλλει καὶ ἤρετο ὅ,τι εἴη τὸ σύνθημα· ὁ δ' ἀπεκρίνατο ὅτι Ζεὺς σώτηρ καὶ νίκη. Ὁ δὲ Κῦρος ἀκούσας, Ἀλλὰ δέχομαί τε, ἔφη, καὶ τοῦτο ἔστω, ταῦτα δ' εἰπὼν εἰς τὴν ἑαυτοῦ χώραν ἀπῆλαυνε.

(*a*) In extract (A), give the import of—*ὡς βουλόμενος, ὡς ἐπὶ τούτους. λαβόντι* :—construe. *οἴκοι* :—give the meaning and explain the formation. *λαβόντα τοὺς ἄνδρας* :—why *λαβόντα* and not *λαβόντι* as above? *τοῦ ξενικοῦ* :—what Genitive? *καταγάγοι* :—give the force of the preposition in this compound. (*b*) In ext. (B), *ἐν τῇ αὐτῇ* :—supply the ellipsis. *θορύβου* :—why the Genitive? What other case might have been used?

3. (*a*) Write short explanatory notes on the following words :—*σύνθημα, στάδια, ἱερά, σφάγια, σταθμός, ὀργυιαί.* (*b*) State briefly what you know about the Anabasis, giving dates.

4. Translate, Homer Iliad, Book I. :—

(C) Ὣς ἔφατ' εὐχόμενος, τοῦ δ' ἔκλυε Φοῖβος Ἀπόλλων,
βῆ δὲ κατ' Οὐλύμποιο καρήνων χωόμενος κῆρ,
τόξ' ὤμοισιν ἔχων ἀμφηρεφέα τε φαρέτρην.
ἐκλαγξαν δ' ἄρ' ὀϊστοὶ ἐπ' ὤμων χωομένοιο,
αὐτοῦ κινηθέντος· ὁ δ' ἤϊε νυκτὶ ἐοικώς.
ἕζετ' ἔπειτ' ἀπάνευθε νεῶν, μετὰ δ' ἰὸν ἧκεν·
δεινὴ δὲ κλαγγὴ γένετ' ἀργυρέοιο βιοῖο.
οὐρῆας μὲν πρῶτον ἐπώχετο καὶ κύνας ἀργούς,
αὐτὰρ ἔπειτ' αὐτοῖσι βέλος ἐχεπευκὲς ἐφιεὶς
βάλλ'· αἰεὶ δὲ πυραὶ νεκύων καίοντο θαμειαί.

(D) Ὣς ἔφατ', ἐδδεισεν δὲ βοῶπις πότνια Ἥρη,
καί ῥ' ἀκέουσα καθῆτο, ἐπιγνάμψασα φίλον κῆρ·
ὤχθησαν δ' ἀνὰ δῶμα Διὸς θεοὶ Οὐρανίωνες.
τοῖσιν δ' Ἥφαιστος κλυτοτέχνης ἦρχ' ἀγορεύειν,
μητρὶ φίλῃ ἐπίηρα φέρων, λευκωλένῳ Ἥρῃ·
"Ἦ δὴ λοίγια ἔργα τάδ' ἔσσετσι οὐδ' ἔτ' ἀνεκτά,
εἰ δὴ σφὼ ἕνεκα θνητῶν ἐρίδαίνετον ὧδε,
ἐν δὲ θεοῖσι κολῳὸν ἐλαύνετον· οὐδέ τί δαιτὸς
ἐσθλῆς ἔσσεται ἦδος, ἐπεὶ τὰ χερείονα νικᾷ.
μητρὶ δ' ἐγὼ παράφημι, καὶ αὐτῇ περ νοεούσῃ,
πατρὶ φίλῳ ἐπίηρα φέρειν Διΐ, ὄφρα μὴ αὖτε
νεικείῃσι πατὴρ, σὺν δ' ἡμῖν δαῖτα ταράξῃ.
εἴπερ γὰρ κ' ἐθέλῃσιν Ὀλύμπιος ἀστεροπητὴς
ἐξ ἑδρέων στυφελίξαι· ὁ γὰρ πολὺ φέρτατός ἐστιν.
ἀλλὰ σὺ τόνγ' ἐπέεσσι καθάπτεσθαι μαλακοῖσιν·
αὐτίκ' ἔπειθ' ἵλαος Ὀλύμπιος ἔσσεται ἡμῖν."

5. Parse carefully the following words:—*βῆ, κῆρ, ἐκλαγξαν, κινηθέντος, ἦϊε, ἔηκεν, βάλλ', καθῆστο, ἔσσεται, σφώ.*

6. (*a*) Designate the Metre, and give the scheme, used in ext. (C). (*b*) Scan the first four verses of the same ext., and point out any metrical peculiarities of quantity.

7. Write in Attic the equivalents of the following Homeric forms:—*βασιλῆας, ποταμοῖο, κούρην, κούρῃσι, γαίης, οὔνομα, θεάων, νεκύεσσιν, τράφεν ἔμμεναι.*

8. Decline in combination, in the Sing. only:—*μείζων ἀνήρ, ὁ ἀγαθὸς πανθητής*:—in the Plural only:—*μέγας τις βασιλεύς, τί μέγα σῶμα*;:—in all numbers:—*ἡ σοφὴ γλῶσσα, τὸ πλατὺ τεῖχος.*

9. (*a*) Write down the Genitive and Dative, Sing. and Plu., of:—*φλόξ, γίγας, θυγάτηρ, δορύ.* (*b*) And the Genitive and Accusative Sing., and Dative Plural of:—*κύων, φύλαξ, τριήρης, ἱππεύς, λιμήν, θρίξ.* (*c*) Write down the Nominative Singular and Plural of:—*κώμας, χώρας, γαστέρα, χερσίν, ποσί, Περσῶν.*

10. Mention the Greek Pronouns that answer to the Latin:—*ipse, idem, qui, quis? hic, ille, se.* (*b*). How many classes of adjectives are there in Greek? Write down the Comparative and Superlative of:—*γλυκύς, μέγας, σαφής, ταχύς, αἰσχρός.* (*c*) Write down the Positive of:—*πλεῖστος, ἐλάχιστος, ῥᾷστος.*

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LATIN.

WEDNESDAY, MAY 30TH:—MORNING, 9 TO 12.

Examiners..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate, Cæsar, De Bell. Gall., Book I.: —

(A) Ea re impetrata sese omnes flentes Caesari ad pedes projecerunt: Non minus se id contendere et laborare ne ea quae dixissent enuntiarentur quam uti ea quae vellent impetrarent; propterea quod, si enuntiatum esset, summum in cruciatum se venturos viderent. Locutus est pro his Divitiacus Aeduus: Galliae totius factiones esse duas; harum alterius principatum tenere Aeduos, alterius Arvernos. Hi quum tanto opere de potentatu inter se multos annos contenderent, factum esse uti ab Arvernis Sequanisque Germani mercede arcesserentur. Horum primo circiter milia xv Rhenum transisse: posteaquam agros et cultum et copias Gallorum homines feri ac barbari adamassent, transductos plures: nunc esse in Gallia ad C et xx milium numerum. Cum his Aeduos eorumque clientes semel atque iterum armis contendisse; magnam calamitatem pulsos accepisse, omnem nobilitatem, omnem senatum, omnem equitatum amisisse. Quibus proeliis calamitatibusque fractos, qui et sua virtute et populi Romani hospitio atque amicitia plurimum ante in Gallia potuissent, coactos esse Sequanis obsides dare nobilissimos civitatis, et jurejurando civitatem obstringere sese neque obsides repetituros neque auxilium a populo Romano imploraturos neque recusaturos quo minus perpetuo sub illorum ditione atque imperio essent.

2. Explain the syntactical construction of the following from ext. (A):— (1) Caesari. (2) Re impetrata. (3) Se venturos viderent. (4) Tanto opere. (5) Quibus proeliis calamitatibus. (6) Essent.

3. State what is meant by the terms *sermo obliquus* and *sermo rectus* severally. Which of the two is used in the above ext? Turn the sentence "non minus" down to "viderent" into the opposite form of statement.

4. Translate, Horace, Odes, Book I.:—

(B) Tu ne quaesieris, scire nefas, quem mihi, quem tibi
finem di dederint, Leuconoe nec Babylonios
tentaris numeros. Ut melius, quidquid erit, pati!
seup lures hiemes, seu tribuit Iupiter ultimam,

quae nunc oppositis debilitat pumicibis mare
Tyrrhenum. Sapias, vina liques, et spatio brevi
spem longam reseces. Dum loquimur, fugerit invida
aetas. Carpe diem, quam minimum credula postero.

(C) Et thure et fidibus iuvat
placare, et vituli sanguine debito
custodes Numidae deos,
qui nunc Hesperia sospes ab ultima,

caris multa sodalibus,
nulli plura tamen dividit œcula,
quam dulci Lamiae, memor
actae non alio rege puertiae,
mutataeque simul togae.
Cressa ne careat pulchra dies nota:
neu promtae modus amphorea,
neu morem in Salium sit requies pedum.
neu multi Damalis meri
Bassum Threicia vincat amystide:
neu desint epulis rosae,
neu vivax apium, neu breve lilium.

5. Name the metres used in extracts (B) and (C) severally, and write down their schemes. Scan the first two verses of each ext. (*c*) *Quaesieris*—explain the use of the subjunctive. *Babylonios numeros; oppositis pumicibus; Hesperia ultima; mutatae togae; cressa nota; Salium; amystide.*——Write short explanatory notes on these expressions.

6. Translate, Virgil, Book I:—

(D) Lucus in urbe fuit media, laetissimus umbrae,
Quo primum iactati undis et turbine Poeni
Effodere loco signum, quod regia Iuno
Monstrarat, caput acris equi; sic nam fore bello
Egregiam et facilem victu per saecula gentem.
Hic templum Iunoni ingens Sidonia Dido
Condebat, donis opulentum et numine divae,
Aerea cui gradibus surgebant limina nexaeque
Aere trabes, foribus cardo stridebat aenis.
Hoc primum in luco nova res oblata timorem
Leniit, hic primum Aeneas sperare salutem
Ausus et adflictis melius confidere rebus.
Namque sub ingenti lustrat dum singula templo,
Reginam opperiens, dum, quae Fortuna sit urbi,
Artificumque manus inter se operumque laborem
Miratur, videt Iliacas ex ordine pugnas
Bellaque iam fama totum volgata per orbem,
Atridas, Priamumque, et saevum ambobus Achillen.

7. Parse the following:— Effodere, monstrarat, fore, oblata, leniit, ausus, adflictis, projecerunt, vellent, coactos esse.

8. (*a*) Decline in the Singular only:—Judex, dies, mare, celer, unus; and in the Plural only:—os, deus, vis, bos, ordo. (*b*) Express in the Comparative and Superlative degrees:—multae arbores, malum opus, benevola mater, nigrum caelum. (*c*) Define *cardinal*, *ordinal*, and *distributive* numerals, and give the Latin for 10, 10th, 10 each, 10 times.

9. (*a*) Into what classes are Pronouns divided? Give one instance of each from the Latin with its equivalent meaning in English. (*b*) Distinguish between *hic*, *ille*, *iste*, and *is*, and write down the adverbs of motion to a place formed from them, severally.

10. From what verbs do you deduce the following:— ultus, adultus, cretus, stratus, occultus, ademptus, pactus, passus? Do any belong to omre than one verb?

11. Correct the following sentences:— (*a*) Urbs non parcenda est. (*b*) Mendax haud creditur. (*c*) Missus est viam explorare. (*d*) Quid me fiet parvum facio.

ENGLISH LANGUAGE. (EARL'S PHILOLOGY).

FRIDAY, JUNE 31ST:—MORNING, 9 TO 12.

Examiners, ... { VEN. ARCHDEACON LEACH, D.C.L. / REV. ROBERT LAING, M.A.

1. What is said to be the law by which the relation of the English language to the Indo-European family is established?

2. Give the substance of the remarks on the use of the term Saxon as a distinction for the early period of English history, language and literature.

3. Mention what is said of the literature of the Anglian kingdom of Northumberland.

4. How did it happen that in the books preserved between 1100 and 1350 there is no uniformity of dialect?

5. Give the dates of the parts into which the transition period of the language is divided and the dates that comprehend the first national English.

6. How is it accounted for that in the 14th century there suddenly appeared a standard English?

7. Give some instances of the dualism of our elder phraseology.

8. What is it that is said to distinguish all the dialects from King's English? And mention the given illustration thereof.

9. Give the substances of the remarks on Runic writing.

10. Give the substance of the historical and critical remarks on the letters C, G, D, T, H, J, W.

11. Explain and distinguish the classes of words denominated presentive and symbolical.

12. Give examples of adverbs denominated "flat" and "flexional."

13. Give the substance of the remarks on the subject of voice.

ENGLISH LITERATURE.

THURSDAY, MAY 31ST:—MORNING, 9 TO 12.

Examiners,..... { VEN. ARCHDEACON LEECH, LL.D.
REV. ROBERT LAING, M.A.

1. Name the writers, with their principal works, before the Norman Conquest.

2. Describe Chaucer's character, give a list of his works, and sketch the plan of the Canterbury Tales.

3. What were the leading characteristics of early Scottish poetry? Give the names of Scottish authors and of their works before the time of Elizabeth.

4. Mention the dramatic writers of the Elizabethan period and give an account of any one of them.

5. Give a short sketch of the life of William Wordsworth, and describe the leading characteristics of his poetry.

6. Name the principal persons introduced in the "Lady of the Lake," and tell what you know of any one of them.

7. Give the substance of Canto 5, entitled "The Conbat."

8. Write notes on the following terms: Lochs Katrine, Achray and Vennachar, Trosachs, Glenartney, Holy-Rood, Fiery Cross, Coronach Benledi, 'Coilantogle' ford.

9. Sketch the life of Addison, and give the leading characteristics of his style.

10. Describe the character of Sir Roger de Coverly.

GEOGRAPHY, PHYSICAL, POLITICAL AND COMMERCIAL.

WEDNESDAY, MAY 30TH:—MORNING, 9 TO 12.

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L.
REV. ROBERT LAING, M.A.

1. What is the shape of the Earth, and how is its shape ascertained?

2. Give its polar and equatorial dimensions.

3. Describe the motions of the Earth.

4. Explain what is meant by the terms Equator or Equinoctial Line and by the Ecliptic.

5. Which are the Tropics, and why are they so denominated?

6. Explain the meaning of the terms Arctic and Antarctic Circles, the Poles and the Zones.

7. Explain the meaning of the terms latitude and longitude.

8. Mention the physical or permanent characters of a country that need to be studied, in the study of its geography.

9. What peculiarity has Nova Scotia in regard to sea coast? What are its chief mineral products, and the manner and form of government?

10. When was the Turkish Empire founded? Of what religions are its inhabitants? What is the form of its government? Which are its three great territorial divisions?

11. Describe the boundaries of Russia and the general character of its surface. Mention its principal rivers, the established form of religion and the *government* of the country.

12. Describe the position of Persia. Mention its chief towns, products and manufactures.

GENERAL EUROPEAN HISTORY.

THURSDAY, MAY 31ST :—AFTERNOON, 2 TO 5.

Examiners,..... { VEN. ARCHDEACON LEECH, LL.D.
REV. ROBERT LAING, M.A.

1. Name the principal Aryan nations of history and give some account of the progress made by them in the arts of life, in religion and government, before their dispersion.

2. Describe briefly the several Persian invasions of Greece. Mention especially the names and dates of the battles fought.

3. Give a short account of the conquests of Alexander the Great and of the effects of his conquests.

4. Give a short account of the origin and history of the City of Carthage.

5. What was the extent of the Roman Empire when Julius Cæsar became Emperor? Name the writers of the Augustan age.

6. Give a brief sketch of the reign of Charlemagne or Frederick the Great.

7. Describe the Norman Conquest and its effects upon England.

8. State the causes which led to the Thirty Years' War, and describe the leading events of the War.

9. Give a short account of the rise of Russia under Peter the Great.

10. How were the English settlements in India first begun?

FRENCH.

SATURDAY, MAY 26TH:—MORNING, 9 TO 12

Examiner,.....P. J. DAREY M.A.,B.C.L.

1 Translate into English:

HARPAGON. Douze mille (*a*) livres de rente?

FROSINE. Oui. Premièrement, elle est nourrie et élevée dans une grand épargne de bouche (*b*): c'est une fille accoutumée à vivre de salade, de lait de fromage et de pommes, et à laquelle, parconséquent, il ne faudra (*c*) aucune (*d*) des délicatesses qu'il faudrait à une autre femme; et cela monte bien tous les ans à trois mille francs pour le moins. Outre cela, elle n'est curieuse (*e*) que d'une propreté fort (*f*) simple, et n'aime point les superbes habits, ni les riches bijoux (*g*) ni les meubles somptueux (*h*), et cet article-là vaut (*i*) plus de quatre mille livres par an. De plus elle a une aversion horrible pour le jeu (*j*); ce qui n'est pas commun aux femmes d'aujourd'hui; et j'en sais une de notre quartier qui a perdu vingt mille francs cette année. Mais n'en (*k*) prenons rien (*l*) que le quart. Cinq mille francs au jeu par an, quatre mille francs en habits et bijoux, cela fait neuf mille livres, et mille écus que nous mettons (*m*) pour la nourriture, ne voilà-t-il pas par année vos douze mille francs bien comptés?

MOLIERE, *Avare*.

2. *a*. Why has not *mille* an *s*? State fully the rule in reference to the word *mille*.

b. What would be the more common and usual expression to express *une grande épargne de bouche?*

c. Give the primitive tenses of this verb.

d. Does that word ever take the mark of the plural? Illustrate your answer by an example.

e. What would be the more usual word used here?

f. What are the two other adverbs almost synonymous with *fort?* Give the etymology of the three,

g. Give the complete list of the nouns which form their plural like *bijoux*.

h What is the singular of *somptueux*? State the rules to write in the plural adjectives which have a similar ending.

i. Write the second person plural of all the simple tenses of *vaut*.

j. What are the different words by which *jeu* is rendered into English?

k. What part of speech is *en*? To what does it refer?

l. What is the meaning of *rien*? What is its etymology? In what sense is it almost always used?

m. Write the second person singular of all the simple tenses of *mettons*

3. Point out two irregular verbs in the above extract. Prove their irregularity.

4. Explain fully the difference between the French and the English languages in the use of the possessive adjectives *mon ton son* etc? Illustrate your answer by three examples.

5. What remarks do you make on verbs ending in *elre* and *eter*? Illustrate your remarks by examples.

6. When would you use the Present of the Subjunctive mood? Give two examples.

7. Write correctly the Past principles of the following seniences: Quelques animaux nous *ont enseigné* à bâtir des maisons. Je ne me souviens plus déjà de tous les déplaisirs que vous m'*avez donné*. Finissez la lettre que je vous ai *donné* à copier. Avez-vous fini la lettre que je vous *ai dit* de copier. Le peu d'affection que vous lui *avez temoigné* l'*a encouragé*.

8. Translate into French:—

The little republic to which I gave laws was regulated in the following manner: by sunrise we all assembled in our common apartment, the fire being previously kindled by the servant. After we had saluted each other with proper ceremony, for I always thought fit to keep up some mechanical forms of good-breeding, without which freedom ever destroys friendship, we all bent in gratitude to that Being who gave us another day. This duty being performed, my son and I went to pursue our usual industry abroad, while my wife and daughters employed themselves in providing breakfast which was always ready at a certain time. I allowed half an hour for this meal, and an hour for dinner; which time was taken up in innocent mirth between my wife and daughters, and in philosophical arguments between my son and me.

GOLDSMITH, The *Vicar of Wakefield*.

GERMAN.

FRIDAY, MAY 25TH:—AFTERNOON, 2 TO 5.

Examiner.....C. F. A. MARKGRAF, M A

1. Translate into English :—

(A) „Wohl hab' ich es gesehen,
Das hohe Schloß am Meer,
Und den Mond darüber stehen
Und Nebel weit umher."

Der Wind und des Meeres Wallen,
Gaben sie frischen Klang?
Vernahmst du aus hohen Hallen
Saiten und Festgesang?

„Die Winde, die Wogen alle
Lagen in tiefer Ruh',
Einem Klagelied aus der Halle
Hört' ich mit Thränen zu."

Sahest du oben gehen
Den König und sein Gemahl,
Der rothen Mäntel Wehen,
Der goldnen Kronen Strahl?

Fragment from „Das Schloß am Meere."
by Uhland.

(B) Der andere, ein Kaufmann, sagte: „Nie habe ich mich mit meines Nächsten Schaden bereichert; nie ist sein Fluch mit mir zu Bette gegangen und von meinem Vermögen gab ich gern den Armen, darum hat mir Gott die Jahre geschenkt."

Der dritte, ein Richter des Volkes, sprach: „Nie nahm ich Geschenke; nie bestand ich starr auf meinem Sinne; im Schwersten suchte ich mich jederzeit zuerst zu überwinden, darum hat mich Gott mit meinem Alter gesegnet." Da traten ihre Söhne und Enkel zu ihnen heran, küßten ihre Hände und kränzten sie mit Blumen. Und die Väter segneten sie und sprachen: „Wie eure Jugend, sei auch euer Alter! Eure Kinder seien euch, was ihr uns seid: auf unserm greisen Haar eine blühende Rosenkrone."

Das Alter ist eine schöne Krone; man findet sie aber nur auf dem Wege der Mäßigkeit, der Gerechtigkeit, und Weisheit.

Fragment from „Die Krone des Alters."
by Herder.

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II. Grammar :—

1. Decline in the Sing. and Plural :—the deepest river ; that long bridge ; a new book (plu. new books.)

2. Give the gender, meaning and Nominative Plural of the following nouns .—Apfel, Stock, Bauer, Frucht, Gräfinn, Zeit, Seemann, Thier, Rabe, Gebäude, Stuhl, Blümchen, Tag, Woche, Fürſt.

3. What are adjective-nouns ? How are they declined ? Give three examples.

4. (*a*) Decline the *personal* pronouns. (*b*) Decline der, die, das, when used *relatively*.

5. Explain the use of words like davon, daran, hiermit, woraus, &c., &c.

6. What is meant by verbs *separable* and *inseparable* ? Explain and write down four of each kind.

7. Conjugate loben, tragen and kennen, giving all persons of the Present and Imperfect, and the 3rd Sing. and 1st Plu. of the other tenses of the Indicative active.

8. Give the Imperfect and Past Participle of geben, fliehen, arbeiten, rufen, reiten, finden, ſprechen, ſitzen, thun.

III. Translate into English :—

Schiller's Werke werden viel geleſen. Die Thäler der Schweiz ſind ſchön. Alle Häuſer dieſer Stadt ſind von Stein gebaut. Wilhelm wird morgen zu Hauſe bleiben müſſen. Ich mochte nicht ausgehen. Dieſer Garten und der meines Nachbars ſind zu verkaufen. Niemand iſt ſo gelehrt, daß er Alles weiß. Der Schnee bedeckt im Winter die Erde. Haſt du die ſchönen Geſchenke ſchon geſehen, welche unſer Oheim uns von Europa mitgebracht hat ? Er hat mir dieſelben gezeigt, als ich vorgeſtern bei ihm war. Die Arbeiter theilten das Geld, welches man ihnen bezahlt hatte, während ſie unter dem großen Nußbaume ausruhten. Wir reiſen heute Abend um ſieben Uhr ab und hoffen, morgen früh in Mainz anzukommen.

GEOMETRY.

FRIDAY, MAY 25TH:—MORNING, 9 TO 12.

Examiners,..... { REV. J. A. LOBLEY, M.A.
ARCHIBALD DUFF, M.A.

1. Define a plane angle, a plane surface, a right angle, a square, a rectangle, a circle, and a gnomon.

2. What is the difference between an axiom and a postulate? In what part of the working out of his propositions does Euclid use postulates?

3. The angle at the bases of an isosceles triangle are equal to one another, and if the equal sides are produced the angles at the other side of the base are also equal.

4. If two triangles have two angles of the one equal to two angles of the other, each to each, and one side equal to one side, viz., either the sides adjacent to the equal angles in each or the sides opposite to them, then shall the other sides be equal, each to each, and the third angle of the one equal to the third angle of the other.

5. From a given point between two given straight lines draw two straight lines, terminated one by one given straight line, the other by the other given straight line, and such that one shall be twice as long as the other.

6. In any right-angled triangle the square described upon the side subtending the right angle is equal to the squares described upon the sides which contain the right angle.

7. If a straight line be divided into any two parts the rectangle contained by the whole and one of the parts is equal to the rectangle contained by the two parts together, with the square of the aforesaid part.

8. In obtuse-angled triangles, if a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle is greater than the squares on the sides containing the obtuse angle, by twice the rectangle contained by the side on which, when produced, the perpendicular falls, and the straight line intercepted without the triangle, between the perpendicular and the obtuse angle.

9. Find the centre of a given circle.

10. If two circles touch one another internally, the straight line which joins their centres, being produced, shall pass through the point of contact.

a. Describe a circle which shall touch a given circle, and shall have its centre in a given straight line, and shall also pass through a given point in the given straight line.

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11. The opposite angles of any quadrilateral figure inscribed in a circle are together equal to two right angles.

12. If a straight line touch a circle, and from the point of contact a straight line be drawn cutting the circle, the angles which this line makes with the line touching the circle shall be equal to the angles which are in the alternate segments of the circle.

ALGEBRA.

MONDAY, MAY 28TH:—MORNING, 9 TO 12.

Examiners,..... { REV. J. A. LOBLEY, M.A.
ARCHIBALD DUFF, M.A.

1. Reduce to its simplest form:—
$\{2x-(3y-z)\}-\{y+(2x-z)\}+\{3z-(x-2y)\}-\{2x-(y-z\}$;
stating carefully the rules of signs involved in your work.

2. Find the continued product of $x+a$, $x-a$, $x+2a$, $x-2a$; stating any rule you use for shortening work.

3. Divide $a^5-4a^3b^2-8a^2b^3-17ab^4-12b^5$ by $a^2-2ab-3b^2$.

4. Write down the quotients of a^6-x^6 by $a+x$, and $(x+y)^3+z^3$ by $x+y+z$, giving the rules for such cases.

5. Find the G. C. M. of $3x^3+3x^2-15x+9$ and $3x^4+3x^3-21x^2-9x$.

6. Find the L. C. M. of $4(a^3-ab^2)$, $12(ab^2+b^3)$, $8(a^3-a^2b)$.

7. Find the value of the following:

(*i.*) $\dfrac{a}{bx}\times\left(b+\dfrac{bx}{a}\right)\times\left(1-\dfrac{a}{a+x}\right)$

(*ii.*) $\dfrac{a^3-3a^2b+3ab^2-b^3}{a^2-b^2}\div\dfrac{2ab-2b^2}{3}\times\dfrac{a^2+ab}{a-b}$

8. Write down the square of $7-2x+x^2$ and the 4th power of ab^2-c^3.

9. Extract the square root of $x^6-4x^5y+10x^4y^2-20x^3y^3+25x^2y^4-24xy^5+16y^6$.

10. Extract the cube root of $x^6-6x^5y+21x^4y^2-44x^3y^3+63x^2y^4-54xy^5+27y^6$.

11. Find the value of x in the following equations:

(*i.*) $$\frac{x+7}{9} - \frac{3x+5}{11} + \frac{7x}{22} = \frac{4x-5}{6} + \frac{3x+1}{11} - \frac{6x-7}{10}$$

(*ii.*) $$\frac{a+x}{x} + \frac{b}{2(b+x)} = 1 + \frac{b}{x}$$

12. Find the value of x and y in the equations

$$\left.\begin{aligned} \frac{x+y}{4} - \frac{x-y}{6} &= 2a \\ \frac{2x+y}{7} - \frac{2x-y}{5} &= 6a \end{aligned}\right\}$$

13. In a boat-race one crew rows 4 more strokes to the minute than the other. At the end of the race it is found that the whole number of strokes taken by the two crews is 1026, and that if the crew with the slower stroke had gone on for $1\frac{1}{2}$ minutes longer, they would have taken the same number that the other crew actually took. Find the time in which the race was rowed.

14. Six men would have cleared a certain piece of ground in ten days. Two men, however, having left before the work was begun, 5 boys were employed in their place, each boy doing on an average half the work of a man. At the end of a certain number of days the men went away, leaving the boys to work alone. When $\frac{3}{4}$ of the work was done, 2 of the men returned, and the whole work was finished in $13\frac{1}{2}$ days from the beginning. Find how long the boys worked alone.

NATURAL PHILOSOPHY:—MECHANICS AND HYDROSTATICS.

TUESDAY, MAY 29TH;—AFTERNOON, 2 TO 5.

Examiners,..... { REV. J. A. LOBLEY, M. A.
ARCHIBALD DUFF, M.A.

I. If 2 forces acting on a point be represented in magnitude and direction by the two sides of a parallelogram which meet at that point, shew hat their resultant will be represented in direction by that diagonal of the parallelogram which passes through that point.

2. Describe a simple method of finding the centre of gravity of a flat solid substance, proving the correctness of the method.

III. A rope fixed at one end passes through a moveable pulley, and is wound round an axle, whose radius is three inches, turned by a handle at

the extremity of an arm 18 inches long. What weight attached to the pulley can be supported by a power of 16 lbs., supposing the two parts of the rope on either side of the pulley to make each an angle of 30° with the vertical.

4. What weight can be sustained on a screw by a power of 2 pounds, the lever by which the screw is driven being 3 yards long, and the distance between the threads of the screw being one inch?

V. A body falls from rest under the action of gravity. Shew that the space through which it falls in the r^{th} second is expressed by the formula $\frac{G}{2}$

6. What must be the length of a pendulum, which shall oscillate ten times in a second?

VII. If two fluids of volume V, v and specific gravity S, s be mixed and form a fluid of specific gravity ; find the volume of the mixture.

VIII. Find the total pressure upon the surface of an isosceles triangle of base 6 inches and altitude 4 inches, immersed vertically with its apex 15 inches under water, and its base horizontal.

9. In one of the Bramah presses used in raising the Britannia tube over Menai Straits, the diameter of the piston at which the power was applied was 1 inch; that of the cylinder applied to the resistance was 20 inches. Calculate the lifting force produced against the resistance, when the power applied at the piston was $2\frac{1}{2}$ tons at a stroke.

10. Describe three different kinds of equilibrium of floating bodies, resulting from the relative positions of the centres of gravity and buoyancy.

MENSURATION.

SATURDAY, MAY 26TH. :—AFTERNOON, 2 TO 5.

Examiners,..... { REV. J. A. LOBLEY, M.A. / ARCHIBALD DUFF, M.A.

1. A pole 60 feet high is broken by the wind, and the top strikes the ground 10 feet from the foot of the pole; how far from the ground is the pole broken.

II. In a garden of the form of an equilateral triangle, whose side measures 24 yards, the whole space adjacent to the fence on every side for a width of 2 yards is occupied by a border. Find the area of the border.

3. The distance between the centres of two circles, whose radii are R and r, is D; find the lengths of their common tangents.

a. What do these lengths become when $D = R + r$.

IV. Find the area of a circular segment whose chord measures 15 inches and height 15 inches.

5. Construct a rule for finding the area of a trapezoid, giving three different methods of proving the same rule.

VI. Find the area of a parabola whose base is 18 inches and height 4 inches.

a. There are two parabolas having the same axis, but the vertex of one is within the other at a distance of $\frac{3}{4}$ inch from its vertex. If the parameter of the inner parabola be 6 inches and that of the other 4 inches, find the area of the space enclosed between the curves.

7. Find the lateral surface of a bucket whose top diameter measures 2 feet 4 inches, and the bottom diameter 1 foot 6 inches, the depth being 1 foot 9 inches.

VIII. Shew how to find the solidity of a wedge whose quadrangular sides are parallelograms.

IX. Find the convex area of the zone of a sphere of radius 5 inches, bounded on one side by a great circle of the sphere and on the other by a circle whose radius is 4 inches.

10. Prove that the volume of a cylinder circumscribing a sphere is a mean proportional between the volume of the sphere and that of the equilateral cone circumscribing. The cone is said to be equilateral when the diameter of the base is equal to the slant height.

BOTANY.

MONDAY, MAY 28TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....PRINCIPAL DAWSON.

1. State the differences between Plants and Animals.

2. Explain the modes of deposit of food in the Embryo Plant.

3. Explain the terms Dicotyledonous, Aerial Root, Biennial, Parasitic, and describe the structures to which they refer.

4. Describe the arrangements of nerves and veins in leaves.

5. Explain the general laws of Phyllotaxis, and mention the more important kinds.

6. Describe in detail the parts of a perfect flower.

7. Describe a Raceme, Chlorophyll, a Legume, a Strobile, a Root-hair.

8. Explain the sources of the Carbon and Nitrogen in plants, and the action of the leaf on CO_2.

9. Describe the elementary cell, and some of the changes to which it is liable.

10. Illustrate by an example the classification of Plants.

11. Describe the parts of the plant exhibited.

ELEMENTARY CHEMISTRY.

MONDAY, MAY 28TH:—AFTERNOON, 2 TO 5.

Examiner,..... B. J. HARRINGTON, B.A., Ph.D.

1. Define the terms element, compound, atom, and molecule.

2. How many litres of Oxygen can be obtained from 80 grains of Potassic Chlorate?

3. How is Sulphuretted Hydrogen prepared and what are its properties?

4. Give the names and formulæ of the compounds which Nitrogen forms with Oxygen, and the properties of any one of these compounds.

5. How is Coal Gas prepared, and what are its principal constituents.?

6. Write an equation illustrating the changes which take place when Hydrochloric Acid acts upon Calcic Carbonate.

7. What are the principal salts of Potassium, and what their more important properties and uses?

8. By what tests may Copper, Lead, and Silver be detected when in solution?

9. Give the symbols and atomic weights of Carbon, Chlorine, Gold, Mercury, and Phosphorus.

10. State the laws of definite and multiple proportion.

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